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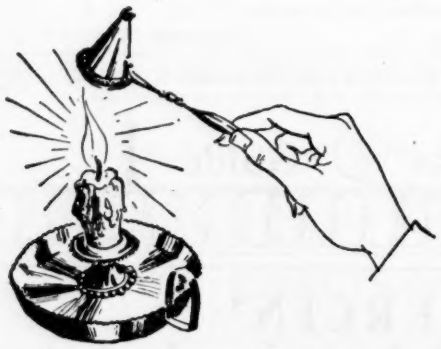

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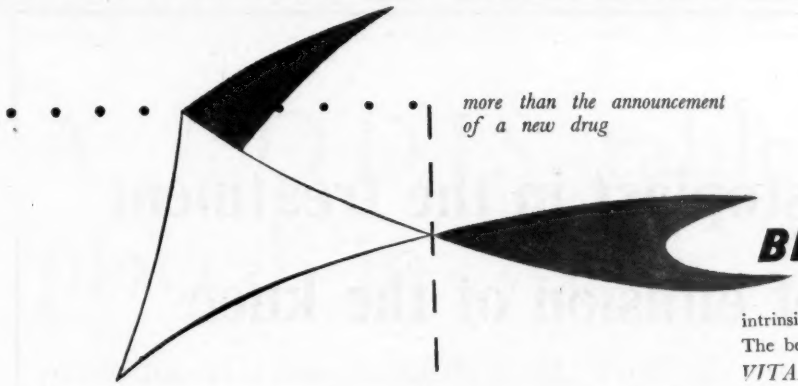

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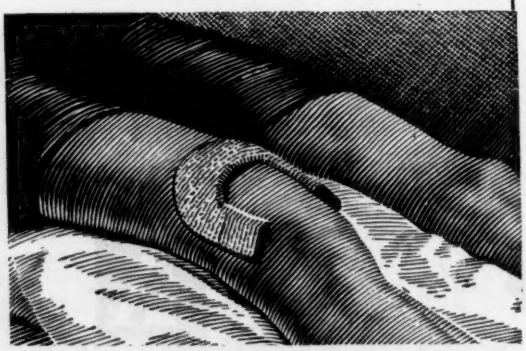

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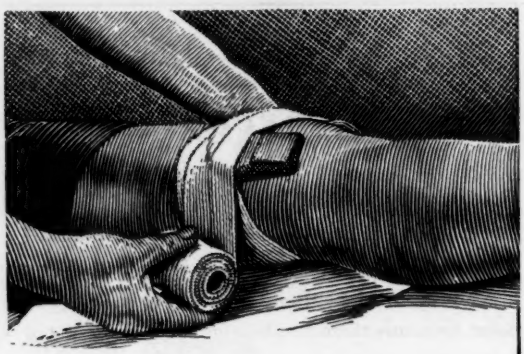

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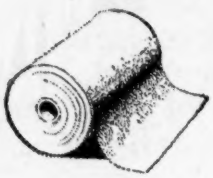

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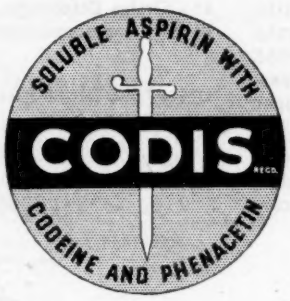

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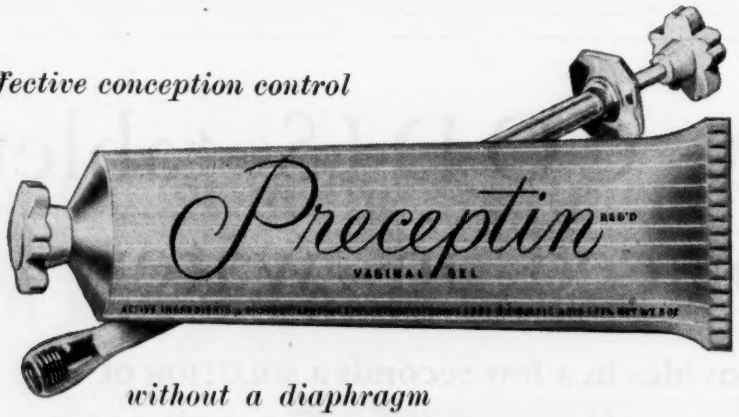

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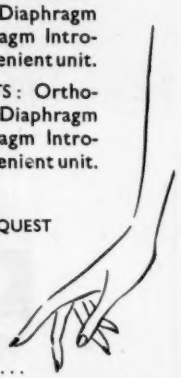

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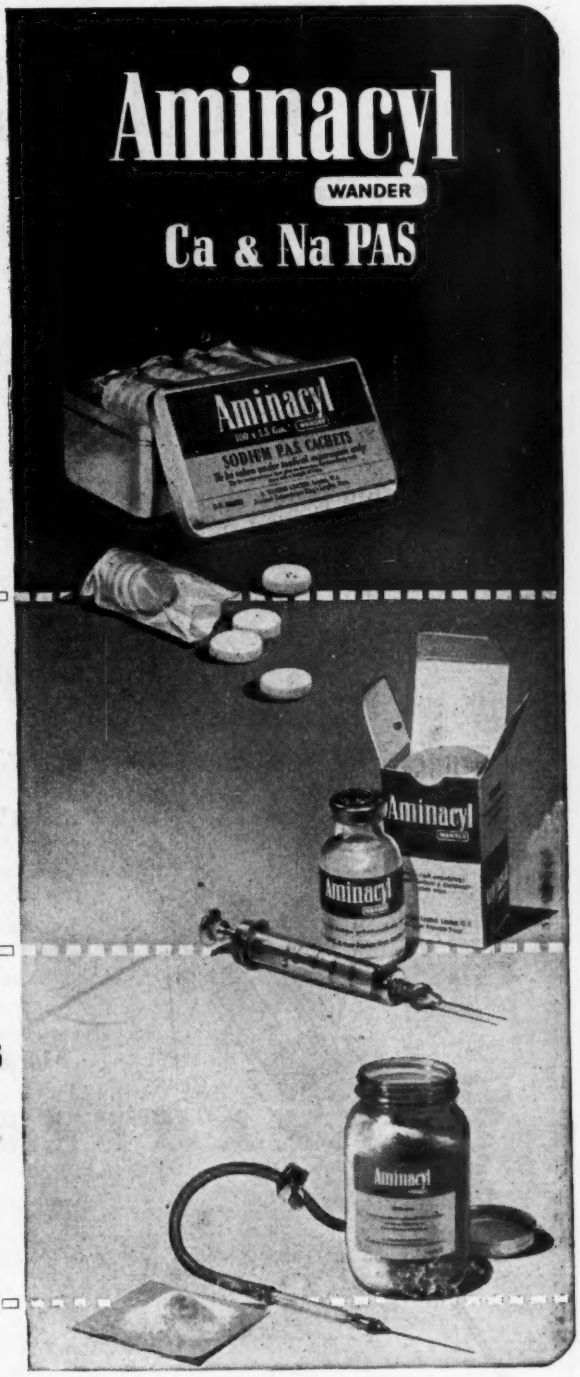

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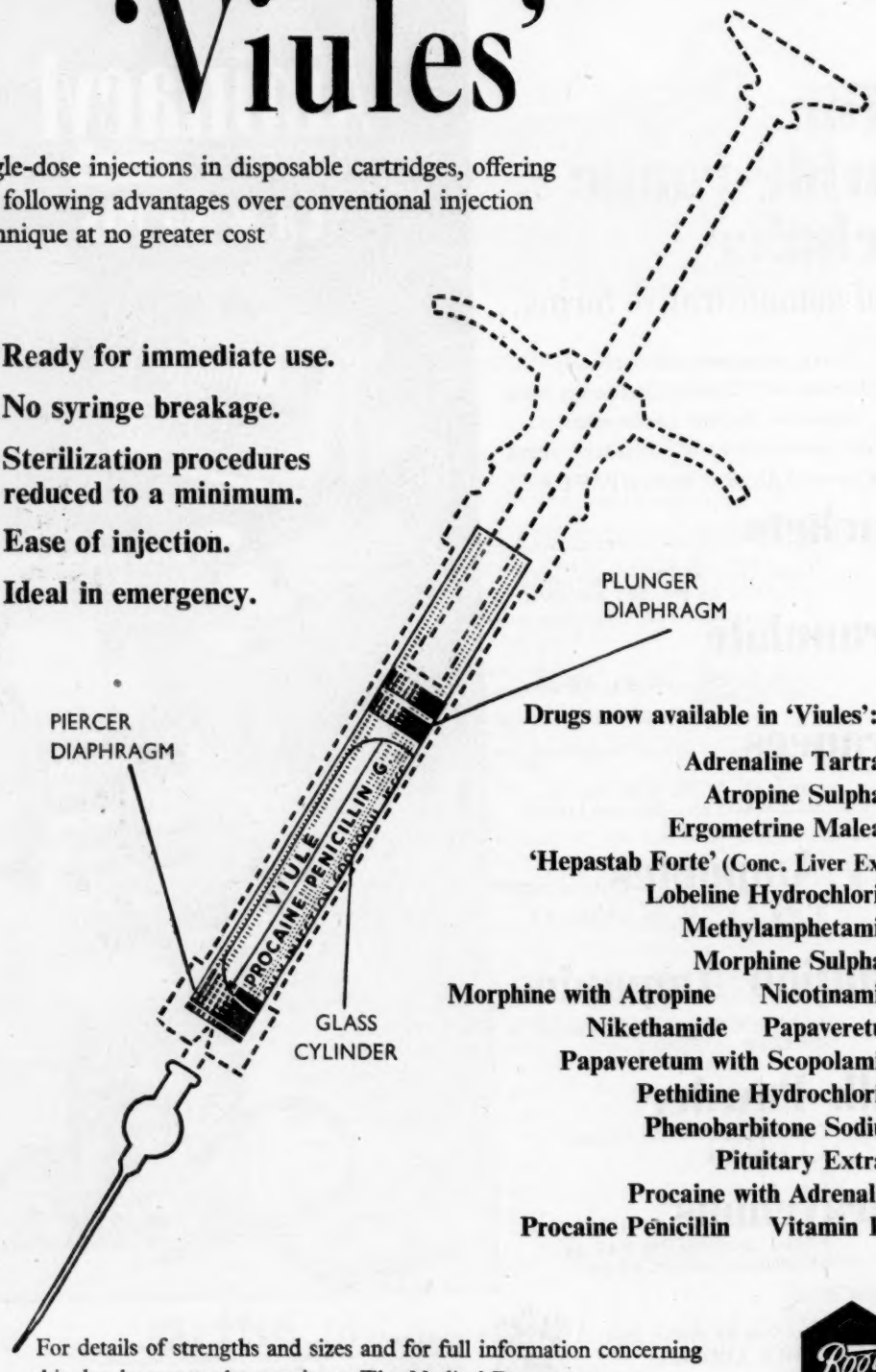

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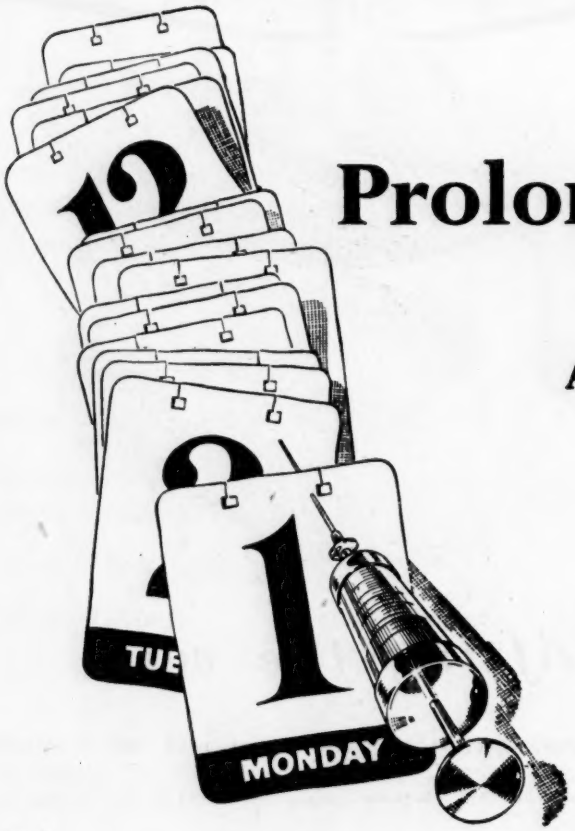

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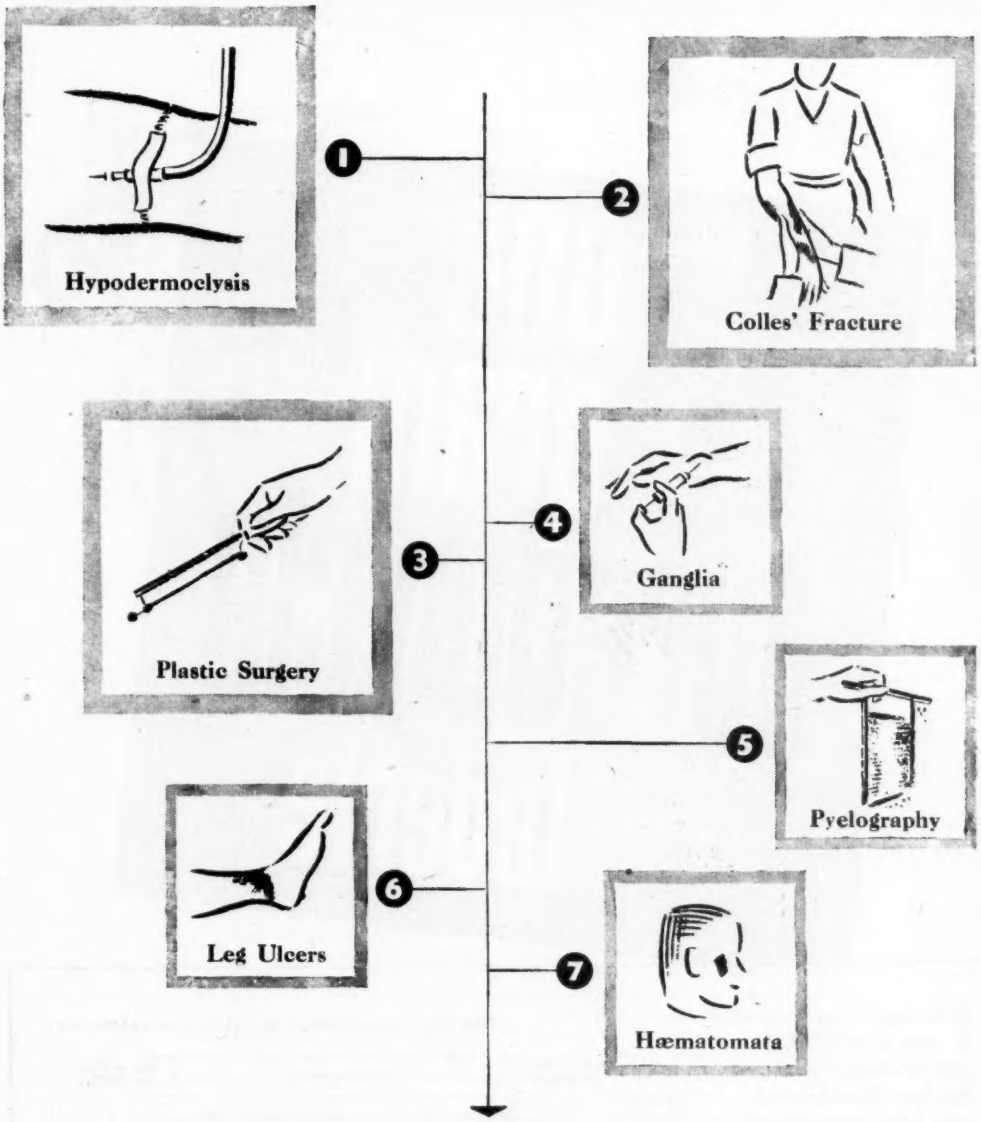

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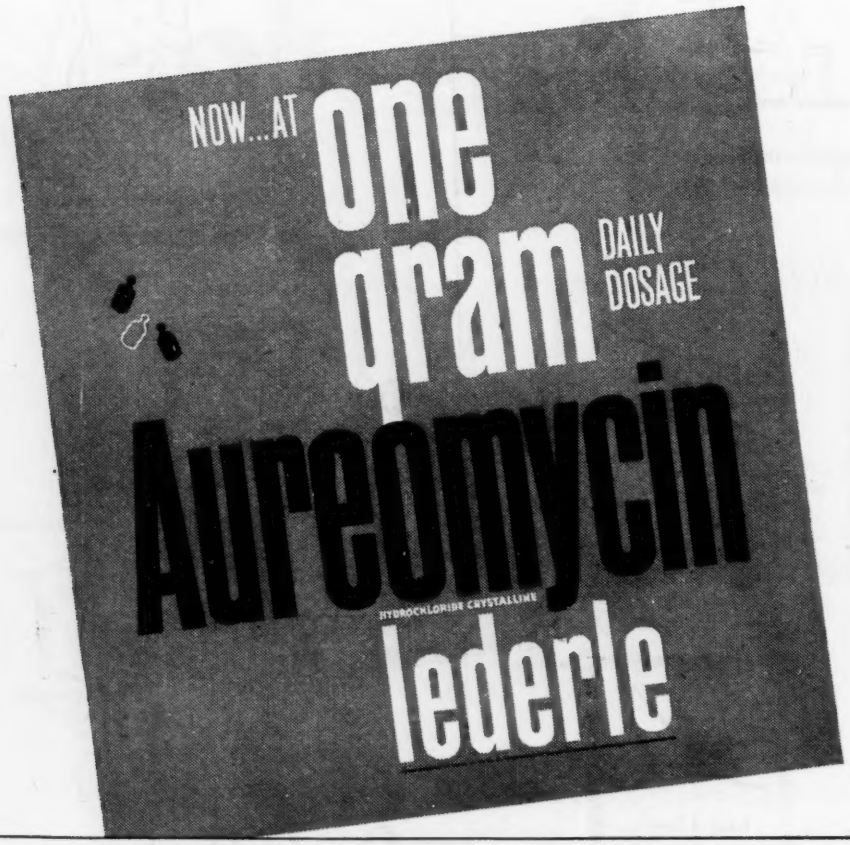

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0.5 Gm. Daily	90 lb.	250 mg. dose twice daily, after breakfast and supper 100 mg. dose every 3 or 4 hours after meals 50 mg. dose every 2 hours with milk	2 5 10
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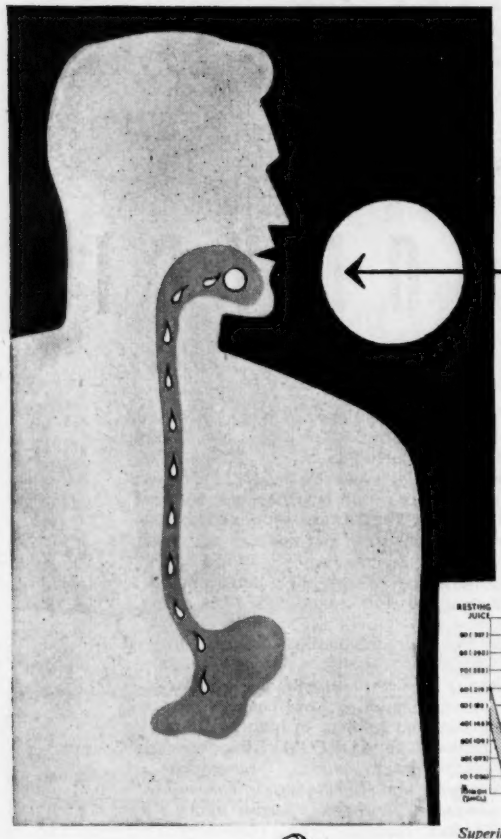

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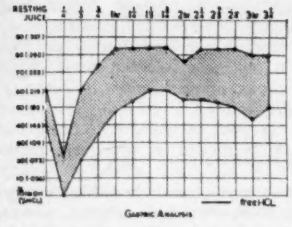
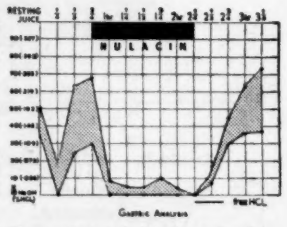
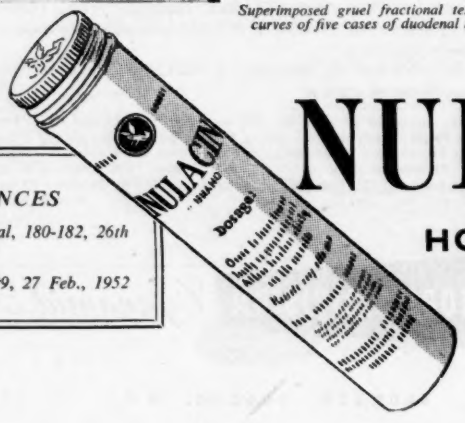


Superimposed gruel fractional test-meal curves of five cases of duodenal ulcer



Same patients as in Fig. 1, two days later, showing the striking neutralizing effect of sucking Nulacin tablets (3 an hour). Note the return of acidity when Nulacin is discontinued.



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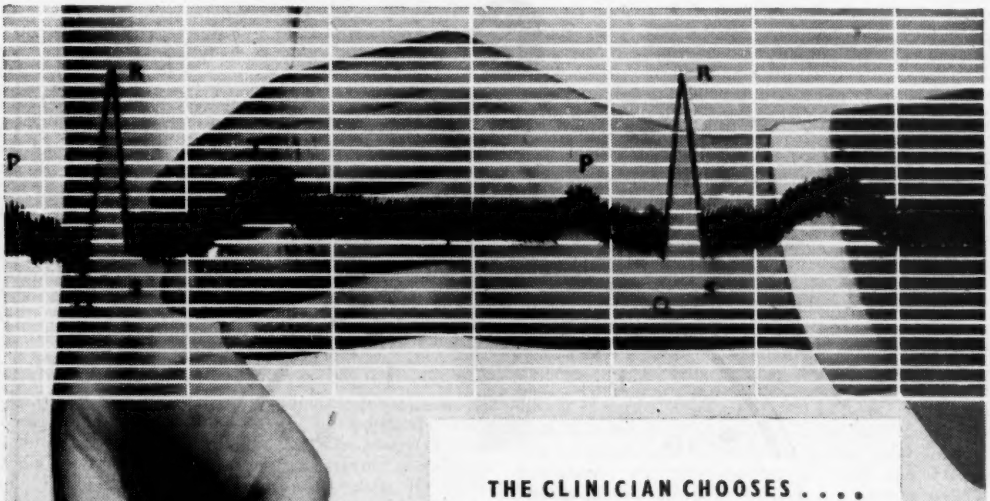

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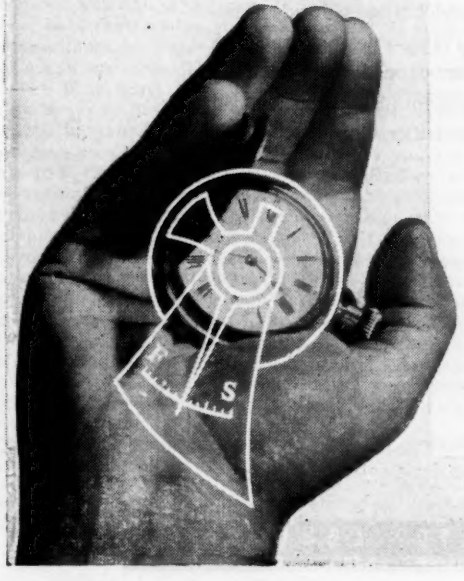

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TO THE NEWLY GRADUATED
A VALEDICTORY ADDRESS *

Sir SYDNEY SMITH
C.B.E., M.D. Edin., F.R.C.P.E.
REGIUS PROFESSOR OF FORENSIC MEDICINE AND DEAN OF THE FACULTY OF MEDICINE, UNIVERSITY OF EDINBURGH

You have been brought up in a world of reason. You have been taught to examine all things in the light of science, and this may have led you to believe that science fulfils all your requirements, and that it can itself provide a philosophy of life or, at least, the material from which such a philosophy can be fashioned. Possibly it can, but a university education, though it must be directed to the production of individuals skilled in the fundamentals of a particular profession, must also foster tastes and stimulate interest in many things which lead to a fuller life both intellectually and emotionally. Do not be led away, however, by the oft-repeated assertion that only by the study of a particular department of knowledge can this be achieved. You no doubt have been told and will be told again that the study of Law or of Medicine is purely vocational and devoid of cultural value. Such assertions are ordinarily made by those versed in neither, but they merit discussion for all that. I have heard it said that it is only by the study of literature written in the Greek and Latin tongues that true culture can be acquired and that no other study can have that ennobling and beautifying effect on the mind. It may well be so, but if such studies have had that effect on my classical colleagues it has completely escaped my notice. But if any subject is studied for the professional benefits which one may acquire from it and not for the pleasure and satisfaction which it gives, it is not likely to have much cultural value; if the mind is concentrated on any one department of learning to the exclusion of all others, it will clearly be narrower in outlook.

Living

It may well be true that we have from necessity directed most of your time to vocational training and that we have not paid much attention to training you how to live. The graciousness of life has perhaps been blurred by the overriding necessity of acquiring efficiency and of keeping abreast of scientific progress. We may thus have given you too little time to cultivate a sense of beauty, to quicken your appreciation, and to improve your discrimination between things which are good and those which are not. That is not necessarily the case, but even if it were, it is fortunately not too late to remedy it. You must not only keep in touch with the literature in your own and related subjects, but you would also be wise to take such interest as you can in literature in general, in music, and in art. History is the great opener of doors and you will find that the history of your own subject will give you an insight into the development of man and his problems, and add interest and colour to your life. Getting a wider knowledge of man and the world he lives in, of his arts and crafts, of his philosophy and religions, and obtaining some acquaintance with the thoughts and ideas of the great scholars and scientists of the past will provide you with a well-furnished mind which, when the emotional side of your life becomes of lessening importance and your work is not the all-in-all that you think it is now, will be a source of comfort and delight.

Do not think that I am talking unrealistically. I know how little time you will have to spare, but I know that if you follow my advice you will soon find that the time so used is well used, and, far from interfering with your general way of life, will embellish it. Remember always that although wide reading may rescue you from living in an intellectual slum, it is quite possible to be highly educated and still lead a life of æsthetic squalor; so do try to interest yourselves in things which have that intangible quality which we call beauty and from which you will obtain quite a special satisfaction.

None of these things, however, can give you what you may find increasingly desirable—namely, to discover some meaning and purpose in life. In your youth you will find many opiates to prevent you from thinking of these matters—your work, your play, and such æsthetic outlets as appeal to you—but the time must come when these ancient unsolved problems will occupy your attention and I am afraid that there is no ready answer. The simple faiths of our fathers would suffice, but our education, especially in Science, has tended to destroy that faith and there does not seem to be any method by which it may be regained. No doubt, as Hippocrates said, it is the duty of a physician to heal his patients and not to philosophise, but though that may suffice in the meantime, we must appreciate that the wide understanding and sympathy which we associate with good medical practice will be reinforced and supported if the doctor himself sees life whole and sees it clearly through an upholding faith.

Progress and Morality

Although the history of medicine goes back to the beginning of written speech, there is no part of that five-thousand-year story which is so exciting and dramatic as that of the past century. Into this period have been crowded more advances in medical science than in all previous recorded history, and as the years unfold, the pace of progress increases, almost in geometrical progression.

In view of the formidable salients that we have established, we might reasonably expect to find comparable progress in our moral outlook and in our social sense, which would naturally be shown in better behaviour; we might, in fact, hope to be on the road to a relatively crime-free state in which knowledge of right and wrong, of good and evil, would in itself be sufficient deterrent to crime. Here again we are unfortunately in error, for we find that all our advances in medical knowledge, all our improved conditions of living, all our social improvements have been accompanied by a rapid rise in all forms of crime, and today there is roughly five times as much serious crime as there was before 1930. Unfortunately the incidence of crime is highest amongst quite young people. The fact that crime does not appear to have been curbed by our various efforts at reform and reablement must raise the question whether our methods of dealing with misbehaviour in general require re-examination. This is a matter which affects both Law and Medicine, for crime is a social disease and Medicine and Law are social sciences.

A thing which we are apt to forget is that there does not appear to have been any inheritable development of the moral or ethical sense in the whole of human history. A child comes into the world now, as always, with but a few primitive instincts such as those connected with self-preservation and procreation. He is normally aggressive and acquisitive and in all respects a potential criminal. What we call criminal tendencies, however, are merely normal primitive urges which are not socially acceptable, and unless they are diverted into channels which conform to the rules of the society in which he lives, the child will be classified as a delinquent. Training has thus to be repeated with each new generation, for,

* Based on the Promotor's Address delivered at the graduation ceremony in the McEwan Hall, Edinburgh, on July 15, 1953. The full text of the address will presently appear in the *University of Edinburgh Journal*.

as I have said, one does not inherit morals. A great deal of responsibility, therefore, lies on the shoulders of those who deal with the training of young people from birth onwards, and the family doctor is one of these. If disorderly conduct in man cannot be controlled, how much less can disorderly conduct in groups or in nations; and without such control what does the future hold? We have had the frightening experience of glimpsing, during the war which we are now recovering from, the primitive savagery of the human mind when the controls elaborated by training went down in the stress of national conflict. That glimpse into the primitive Hell of the mind of uninhibited man tells us that unless we can control ourselves, there must always be a danger of a complete eclipse of the civilisation of which we are so proud. It seems to me to be inevitable that such a catastrophe will occur if we continue to put more and more dangerous instruments into the hands of the human race which is unable to control itself, and in which, I fear, control cannot be established in the time available.

The Harmony of Mind and Body

The insistence on the scientific approach to the study of disease has not, I hope, left you with the feeling that man is but a bag of organs each of which is liable to certain disease processes for which appropriate treatments may be available. This would be to give you an entirely wrong conception of the place of the doctor. There is no such thing as a diseased organ in isolation, there are no diseases to treat—but only diseased men. Do not forget that you are dealing with the whole man—not only the body, not only the mind—but the man himself. You must take into consideration not only his physical condition but his general environment, including his work and his domestic affairs in so far as they may have some relation to his physical and mental state. You must remember that many patients come to you not only suffering from damaged bodies, but with bruised minds, lacerated consciences, and broken hearts. You have not seen examples of these in your museums, but they are real enough, and much of your success as doctors will depend on the care and understanding with which you treat such matters.

From the earliest days of recorded history, physicians have been aware of the importance of the harmony of mind and body in relation to physical ailments. Empedocles, Hippocrates, Plato, and Galen have all spoken of these matters. John Goodsir, who gave the Promotor's Address in Edinburgh in 1859, declared: "In the treatment of disease the adjustment may require to be directed as much to the psychical as to the physical conditions of the case." Now listen to Shakespeare speaking three-and-a-half centuries ago:

Macbeth: How does your patient, Doctor?
Doctor: Not so sick, my lord,
As she is troubled with thick-coming fancies
That keep her from her rest.
Macbeth: Cure her of that:
Canst thou not minister to a mind diseas'd,
Pluck from the memory a rooted sorrow,
Raze out the written troubles of the brain,
And with some sweet oblivious antidote
Cleanse the stuff'd bosom of that perilous stuff
Which weighs upon the heart?
Doctor: Therein the patient must minister to himself.
Macbeth: Throw physic to the dogs; I'll none of it.

An excellent description of the clinical effects produced by a guilty conscience. The doctor appears, at first sight, to have adopted a negative attitude, but you will remember that after seeing Lady Macbeth sleep-walking, he said to her waiting gentlewoman, "More needs she the divine than the physician," indicating that he had diagnosed her condition as being due to a guilty conscience but, in the awful presence of the tempestuous Macbeth, he apparently judged it prudent to keep his diagnosis to himself.

Thus, scientists and philosophers have long noted the importance of balanced action (and interaction) between body and mind; the question of the relationship between the two has indeed already intruded violently upon our notice in medical practice. The duty now falls on us to examine the character and implications of this relationship, however formidable an enterprise that may appear today. As this knowledge is gained, preventive medicine of the future will have increasingly at its command both a fuller understanding of the means by which balance is maintained between the various systems of the body and between body and mind, and an accepted means of diagnosing imbalance. I have no doubt that when all this has been achieved, entirely new vistas in the maintenance of health will be opened up. Meanwhile, we must do our best to apply our present skill in investigation to the early diagnosis of imbalance, which probably occurs long before disease makes itself manifest, and to the problem how such early imbalance can be adjusted.

You may consider that these matters and many other growing points in medical science, such as the intensive research into fundamental knowledge of the cell, of the growing importance of physical biology, of balanced action between mind and matter and the physical effects of emotional states thereon, do not closely concern you and that they are matters of interest only to those whom you consider great scientists. Nothing could be farther from the truth. You in your walk of life, by careful observation and careful recording, can all take part in the advance. Many of the great steps forward have been the result of observations, not of geniuses but of quite ordinary people like you and me. If you are honest and sincere in all your observations, in all your deductions, and in all things relating to your work, you will play your part in scientific progress, whatever your position in life may be. You cannot all be clever, but you can all be honest, and that attribute alone will place you amongst those who will undoubtedly merit respect from their fellows.

The Wider Scene

It is not fitting for us complacently to point to the advances that we have made in maintaining health, in preventing disease, in increasing the duration and improving the standard of life, when in the world about us disease is still rampant. We cannot view with equanimity the fact that, although the expectation of life of a newly born baby in Britain is about 65 years, a baby in India can expect to live for only 27. Nor is the length of life the only story; think of the misery and ill health which precede these early deaths. Moreover, not only are more than a third of the world's people today living on a subnormal diet with all its dangers, but there are annually about 20 million more mouths to feed. It is essential that there should be either a considerable increase in the world production of food or that steps be taken to limit the birth-rate. This dilemma is inescapable.

Health, though universally esteemed, has no vested interests, and to the profession of medicine there are no frontiers either national or ideological. Interested as we are only in the health and wellbeing of the people in every land, it may well be that a combination of doctors throughout the world in a drive for health may prove to be the first real step towards world peace.

Envoi

This, then, is our heritage, and these some of our responsibilities. Conscious of the many problems which beset us, let us not only devote ourselves to those things which lie clearly to our hand, but look towards the misty

horizon of the future in the knowledge that much will be revealed to us which is now but formless dreams. In this world of falling ideals, of shifting standards and abandonment of faith, let us remember that the professions of Law and Medicine have stood with rock-like firmness against all subversive tides. Let us then hold fast to those principles of conduct enunciated by our forefathers, which were their stay and staff throughout the centuries, and pass on undimmed to our successors the torch of knowledge and the ideals that have been bequeathed to us.

BASIC SCIENCE

SOME OBSERVATIONS IN THE UNITED STATES

D. C. SINCLAIR
M.A. Oxfd, M.D. St. And.
UNIVERSITY DEMONSTRATOR IN HUMAN ANATOMY, OXFORD UNIVERSITY

THANKS to the generosity of the Rockefeller Foundation, I have just spent three months visiting medical schools in the United States of America, and seen something of medical education in the preclinical or "basic" sciences.

I can do no more than record one man's impressions of a restricted number of places; for there are 81 medical schools in the U.S.A. and I visited only 12.* The present adventurous tendencies of American medical education make it inevitable that so small a sample should have missed much of importance; nevertheless, the tour was planned to cover as wide a range of conditions as possible.

At the moment a wave of educational unrest is rolling over the medical schools of the U.S.A. Curriculum committees are in session throughout the land, teaching "shop" has replaced clinical "shop" in the internes' dining-room, and the questionnaire has come into its own (one head of a department recently received in a single year 82 questionnaires, dealing for the most part with methods of teaching). In an attempt to turn all this energy to good account, the Association of American Medical Colleges has undertaken a series of "teaching institutes" (Berry 1953), at which the teaching of different subjects will be discussed. The first of these institutes, dealing with physiology, biochemistry, and pharmacology, is to be held in October, and subsequent sessions will be held annually. Meanwhile, discussion is universal, and this in itself is educating teachers to an appreciation of what goes on, not only in other medical schools, but also on other floors of their own building. Arguments will, of course, persist indefinitely, since no adequate objective techniques as yet exist for the assessment of new procedures in medical education. It is, perhaps, a major criticism of some of the current educational experiments that little attempt is being made to find out the effects produced on the students. Western Reserve University School of Medicine is at the moment acting as an enormous pilot plant for various educational techniques, which are being pursued with great energy and determination. This carries with it a certain risk, and not for many years will it be known whether the risk has been justified. By the deeds of the Reserve graduates we shall know them. But what are these experimental techniques, and why are they being adopted? To answer these questions we must examine the background of standard teaching against which they stand out.

Students

In the last few years there has been intense competition for places in American medical schools, though by 1951 the peak had been passed (Stalnaker 1951).

In 1953 the Admission Requirements of American Medical Colleges shows estimated figures varying from 150 applicants for 120 places at the State University of Iowa to 1400 applicants for 50 places at Albany. Almost all schools insist on three years of college work, and in practice most accepted candidates have completed four. Admission procedure is remarkably uniform; the candidate sends evidence of his college grades and his physical and financial stability, and if he appears suitable he then has an interview, lasting perhaps half an hour, with each of several faculty members. Likely men who do not live within range of the school may be interviewed by proxy.

The medical college admission test—"a mixed test of general scholastic ability, understanding of modern society and achievement in science" which is administered by the Educational Testing Service (1953) in Princeton—is either insisted on or "recommended" by 79 out of the 81 medical schools. The details of the admission process are complex, and it must suffice to say that the main obstacle in the path of the medical student is the business of becoming one. Once admitted, he runs little risk of being thrown out, for in the bigger private schools a wastage of more than one or two students each year is unusual. Indeed, any scholastic failure is regarded as a failure of the selection committee, and the causes are very carefully investigated before the student is refused permission to continue. In State schools the wastage is often greater, for they are bound to give preference to applicants from their own State, and these may not always be of the quality obtainable by a school with no restrictions on its catchment area.

The average successful student arrives with a good grounding in physics and chemistry and a fair knowledge of elementary biology; he is often inadequately informed on other subjects, such as mathematics and English (Dorst 1947). Courses such as genetics, psychology, or comparative anatomy sound well on paper, but are considered by medical schools as of little value. The Association of American Medical Colleges has said that a wider and less specialised premedical education is desirable, but so far this opinion has had little effect (Whitehorn 1952).

College training is a time of intense and often almost morbid competition for grades, and the attitude that examination marks are an end in themselves may persist into medical school. American students are more articulate in conversation and in public speaking than their British colleagues, but even less able to express themselves on paper; this failing may in part be attributed to the examination system in many parts of the country, which makes it possible for a student to be admitted to medical school without ever having been asked to write down his ideas on any subject.

The average American student is some two years older than the British student, more serious-minded, and more aggressive. Something like one-third of the students may be married, and many have part-time jobs.

Curriculum

The greater part of the first two years of medical training is devoted to six major subjects: anatomy, physiology, biochemistry, microbiology, pathology, and pharmacology. These are commonly referred to as the "basic sciences," and are compulsory in all schools. An analysis was made of the allocation of time to these six subjects in 10 out of the 12 schools I visited, the 2 schools with unusual curricula (Western Reserve and Colorado) being omitted. The mean number of hours allotted to

* Albany Medical College; University of Cincinnati College of Medicine; University of Colorado School of Medicine; Columbia University College of Physicians and Surgeons; Cornell University Medical College; Harvard University Medical School; State University of Iowa College of Medicine; Johns Hopkins University School of Medicine; University of Rochester School of Medicine; University of Vermont College of Medicine; Western Reserve University School of Medicine; Yale University School of Medicine.

TABLE I—HOURS ALLOTTED TO INDIVIDUAL SUBJECTS

Subject	Mean hours	Range	Variation in percentage of time allotted by different schools
Anatomy ..	573	430–680	28–38
Physiology ..	253	170–370	12–19
Biochemistry ..	220	155–295	10–15
Microbiology ..	200	145–320*	8–18
Pathology ..	331	285–375*	17–25
Pharmacology ..	139	75–170	5–10

* The variations in the figures for pathology and microbiology are partly due to the vagaries of parasitology, which may be taught in either or neither and to the erratic inclusion of clinical and special pathology (usually these are separate subjects).

each subject is shown in table I, which shows also the range of variation in the proportion of the total available time allotted to a particular subject by the individual schools. The figures must not be taken too seriously, for they are derived from the bulletins of the schools concerned, and these often conceal just how many hours are spent on a given subject by utilising codes, credits, points, semester hours, clock hours, &c. Nevertheless, they do give a rough idea of the distribution of time between the six basic sciences, and up to a point this may be taken as indicating the distribution of emphasis.

The two morphological sciences, anatomy and pathology, account for more than half the time, and the subject on which emphasis varies most is microbiology, though the situation here is complicated because parasitology (which takes a surprising number of hours) is sometimes taught with microbiology and sometimes by other departments, such as pathology or public health. Microscopical anatomy is, logically and conveniently, taught with gross anatomy, which accounts for only 338 of the mean figure of 573 hours given in the table. It is interesting that in Western Reserve the time spent on anatomy in 1907 was about 1100 hours, while just before the introduction of the new curriculum the figure was 576 (Hoerr 1953); but this change still leaves anatomy the dominant time-consumer in all medical schools. A small part of the reduction in anatomy teaching time results from the virtual abolition of embryology, unless as an elective subject. It seems to me questionable whether this is altogether a good thing: most students find the embryological approach valuable in the understanding, as opposed to the memorising, of adult anatomy, and also in the appreciation of congenital malformations; college courses in embryology are virtually useless for this purpose. Less topographical detail is taught than formerly, but there is no benefit to the student, for any concessions in anatomy seem to be offset by new demands in biochemistry. Students no longer have to remember the facets on the carpal bones, but instead they are required to memorise the steps of steroid synthesis in the liver. Indeed, in most departments of biochemistry the emphasis is on the second half of the word, and it is not too much to say that in many places the prevailing approach to medicine is a chemical rather than a biological one.

Anatomy tends to be taught in a more or less isolated "block" as the first subject the student encounters, and not until he has finished his investigation of structure does he proceed to the study of function. It can be argued that biochemistry would afford an easier transition between the science of the college and the more purely medical subjects of the medical school, and this idea is being put into practice in Western Reserve. After the anatomy stage there is a closer liaison between the work of different departments, and in some schools the biochemistry and physiology departments combine their facilities and teaching for certain parts of their courses, such as the study of respiration. This partial "integration" of the two departments has been pushed to its logical extreme in Western Reserve, where the teaching programme transgresses all departmental barriers.

In all the basic-science subjects clinical material is often used to drive home the lessons learned in the preclinical years. Thus, patients with œdema or diabetes are introduced to the biochemistry class, and patients with lesions of the nervous system to the anatomy class. This is easy for those schools whose basic-science departments are housed in the same building as their teaching hospitals, but a separation of even half a mile between the two produces a psychological dichotomy which makes this sort of thing much more difficult. Pathology and microbiology have, of course, their own liaison with the clinical side, the latter through the course on infectious disease, and the former through the clinicopathological conference.

Teaching Staff

The teaching of basic science is done by the departmental staffs, assisted by graduate and postgraduate students. There is usually a professor, one or two associate professors, and a number of assistant professors, but there may be several full professors, of whom one is in executive charge of the department. In America, as here, one of the chief concerns in the staffing of a basic-science department is the financial one. The newly qualified M.D. can earn considerably more in clinical practice than he can as a teacher, and he does not readily embark on a teaching career. Table II shows the proportion of medical qualifications among the whole-time teaching staff (down to the level of assistant professor) in the 12 schools. Pathology is virtually a medical preserve, and if the pathology figures are omitted, only 40% of the remaining basic-science staffs are medically qualified.

The analysis of the figures by departments and rank is interesting. The biochemistry departments have the lowest proportion of medical degrees, yet biochemistry is now perhaps the most rapidly developing medical science. This situation may be reflected in the relatively greater number of medical qualifications among the younger men. This also applies to anatomy, where the figures could be taken to show the recent emergence of anatomy as a dynamic functional subject. On the other hand, recent developments in microbiology and pharmacology have necessitated the coöption of many kinds of people other than the traditional bacteriologist and teacher of materia medica. The proportion of medical qualifications in the newcomers to these disciplines has fallen; these men are virologists, chemists, physicists, and so on.

The ideal proportion of medically and non-medically qualified teachers in a given department has yet to be determined. But it is obvious that if non-medical teachers are in the majority (and in 8 departments I visited they had no whole-time medical colleagues at all), their qualifications and training are of great importance. Almost without exception these teachers

TABLE II—PERCENTAGE OF WHOLE-TIME TEACHING STAFF WITH MEDICAL QUALIFICATION (12 SCHOOLS)

—	Whole-time teachers with medical qualification (%)							
	Anatomy	Physiology	Biochemistry	Microbiology	Pathology	Pharmacology	Total	Total less pathology
Professors	33	29	5	57	96	77	49	36
Associate professors ..	41	42	6	52	96	89	54	41
Assistant professors ..	62	43	25	21	97	54	57	42
Total	46	38	12	45	96	71	54	40

hold doctorates of philosophy obtained in the graduate schools of various universities. The modern programme required for such degrees usually involves attendance at the medical students' classes in all the basic sciences, plus an advanced course in the subject to be professed. This is followed by a year in which the graduate student assists in the teaching of medical students in his chosen department, and finally by a period in which he works up his thesis. In this way he acquires a knowledge of the scope and function of other basic-science departments, as well as a detailed grasp of his own subject. At Harvard, a special experimental training programme in the fundamentals of the medical sciences has been set up for the integrated training of graduate students who are to become basic-science teachers (Berry 1953); this is based on an acceptance of the idea that the future of basic-science teaching in the U.S.A. lies with the non-medically qualified teacher.

The financial structure of most basic-science departments is such that most of the staff get paid more for research than for teaching, and in some quarters there has undoubtedly been an attitude (not unknown on this side of the Atlantic) that research is the important thing, and teaching is a dull, time-consuming, and sometimes faintly ridiculous chore. This is sometimes responsible for an unfortunate reaction to students' problems: it has been known for a teacher, approached by a student with what he considers a stupid question, to roar abuse and profanity at the student and refuse to answer it. Such teachers are asked no more questions. They are, however, becoming rare, and instead there is a tendency for teachers to go to the opposite extreme and consult the students with regard to the quantity, quality, and nature of the course set before them. This is usually done by means of anonymous questionnaires, and, I think, is not wholly without danger. Students are not qualified to operate a "self-service" scheme of this nature, and should not be required to distribute their own emphasis on subjects the importance of which they are in no position to judge.

Other contacts between staff and students are facilitated by the election of a class president from among the students; and the class photograph is a great help to the teacher. This consists of a page or pages of individual photographs of each member of the class, with his or her name underneath. Reductions of this photograph are distributed to each teacher, who is thus able to learn his students' names with a minimum of effort. In at least one school each student also wears a small name-tag on his white coat.

Teaching Methods

The chief weapons of the teacher are lectures, conferences, demonstrations, and practical classes. The formal lecture is much the same on both sides of the Atlantic. Lecturers seldom attempt to cover the whole subject, merely amplifying the more difficult points and trying to stimulate interest. Duplicated notes are often distributed in advance, and the student is asked to read up the subject before the lecture. In some departments teachers lecture only on their own research work; in some they lecture only on subjects other than their own; and in others no formal lectures are given at all, and the staff rely on personal contact of student and teacher at conferences and practical classes. Lectures are occasionally recorded on tape and played back to the lecturer to allow him to appraise his technique.

"Conference" is a name given to many types of activity, ranging from questions asked round the class to full-dress debates organised by the students themselves. The object of most conferences is to get the students to thrash out their own difficulties. In certain schools the class is divided into small groups for teaching; and these groups pass in rotation through the hands of several teachers.

Demonstrations of difficult techniques and preparations are often given, but the emphasis is on the student doing things for himself in the practical class. Practical-class schedules are usually handed out to the student at the beginning of term, and are often extremely detailed. They may also be unusual, such as the Colorado attempt to make up a physiology schedule of purely human experiments.

Interest in audiovisual aids is still strong in some places, but the general opinion is that the most useful of them is the blackboard. But films are used regularly in some departments, and sporadically in most, to illustrate specific points. Some schools have a separate "audiovisual department," such as the one at Western Reserve, which makes and shows films, lantern-slides, teaching models, and tape records, and is also interested in developing new resources, such as television, for teaching purposes.

Ancillary Subjects

The six basic-science courses do not completely fill the first two years of the average medical course, and in all schools other subjects are included in this time. Apart from frankly clinical intrusions from the third year, a number of subjects, such as medical history and embryology, are offered as electives or, in a few instances, as compulsory courses. Biophysics is a separate compulsory subject in Colorado, and is incorporated in the physiology teaching of another 2 schools. Biostatistics is a separate and well-organised course, dealing mainly with the interpretation of scientific data, in 4 schools, and is dealt with, in passing, in the pharmacology or physiology departments of most others. A course on the use of the library (with practical examinations) is given in several schools. But the most flourishing of the ancillary disciplines, and one which is compulsory in all 12 schools in spite of its comparatively recent growth, is the subject of psychobiology, which will undoubtedly in time lay claim to becoming the seventh basic science. Psychobiology is a course, usually of some fifty hours' duration, which deals with the development of personality and behaviour. It is given by the department of psychiatry in an attempt to leaven the materialistic outlook inevitably fostered by a two-year study of morphology and physicochemical causality. Most such courses have two main objects; firstly, to stress the fact that patients are human beings and must be treated as such; and secondly, to emphasise the importance of intangible factors, such as emotion, in the tidy sequence of structure and function that the students are studying. One of the best of these courses has been summarised by Whitehorn (1947), who has also dealt with their general background (Whitehorn 1942).

By introducing the student to the study of personality thus early in his course, it is hoped that he will no longer find himself at such a loss when, at the end of his second year, he faces the complex personal relationships that the practice of medicine imposes (Romano 1950). The aim is unexceptionable, but the practice is not always above criticism. As Romano points out, psychiatry has until recently had little prestige in the curriculum, and its emergence into a more respected place has led to an exuberance not always easy to justify; full-blown discussions of neurosis and psychosis are sometimes placed before the students at a time when they have had no instruction in somatic illnesses. Again, the prevailing psychiatric method in the U.S.A. is analytical, and analytical concepts need very careful presentation to a first-year audience if the whole subject is not to fall into disrepute. My small experience of these courses suggests that, oftener than their teachers suspect, what the students acquire is not an idea of personality and personal relationships but a dangerously half-baked version of psycho-analytical doctrine.

There is also a move to place the instruction in case-taking, which commonly comes at the end of the second year, under the care of the psychiatrists, and in some schools this is taken to great lengths. The whole subject of the teaching of psychiatry in medical schools has recently been summarised by the American Psychiatric Association (1952).

Examinations

If a student wishes to practise in a particular State, he has to satisfy the State authorities of his competence. This is done by passing either the State Board examinations, which will enable him to practise in that State and a restricted number of others, or the National Board examination, which is recognised by virtually all the States in the Union. The basic-science part of this examination is taken at the end of the second year, and the clinical part at the end of the fourth year. The student has also to pass a series of examinations by the individual departments of his medical school to assess his readiness to proceed with the course. The number and nature of these is entirely a departmental matter; there are no external examiners. Thus, at Yale promotion is based on evaluation of progress by the teaching staff; there are examinations, but these are, at least theoretically, not obligatory. On the other hand, in one department of another medical school the students until recently had one examination every week. These two extreme examples, oddly enough, have the same rationale—to reduce the psychological pressure due to the formidable hurdle of a single examination which can determine the student's whole future. Frequent small examinations give him plenty of chance to make up for blunders, which are thus not irrevocable. Because of the mark-hunting trait of the American student, it is regarded as bad practice to announce the marks of an examination, or to allow any student to know how he himself or any other student is progressing; those who fail are informed secretly.

Oral examinations are rare; it is usually regarded as impracticable to give oral examinations to any class of over 70 students, except in the form of mass "quizzes" to 20 or 30 students at a time. In written examinations the "objective" type of paper is replacing the "essay" type more familiar in this country. The most satisfactory form of objective examination is agreed to be the "multiple-choice" question, in which the student is presented with a question and five possible answers; one of these is right and the others are plausible "distractors." He makes his choice with a special pencil on a special answer sheet, which can then be inserted in a machine and marked electronically. From this year, the whole of the National Board examinations will be of this type, which is already common in many universities and medical schools. There can be no doubt that it will gain further ground because of the desire to prepare students for the National Boards. Such examinations sample the subject better than essay questions (some 230 multiple-choice questions can be asked in 3 hours), their marking involves no subjective assessment, and they appear to correlate better with the ranking of the students by their teachers than essay-type examinations (Cowles and Hubbard 1952). The most cogent argument, however, is the impracticability of adequately correcting so many thousands of essay-type questions; in contrast, hundreds of papers can be marked and checked in an hour by a single machine. Nevertheless, multiple-choice questions do not test the capacity of the student to organise his thoughts into logical sequence and to marshal an argument. It is perhaps a failing of American education as a whole that undue stress is laid on the acquisition of facts at the expense of the capacity to think for oneself, and these examinations may exaggerate this fault. For this reason, many departments are continuing to set papers containing essay questions, though these usually call for short answers only, a limited space being provided for the candidate's views.

The Orthodox Position

There is no more than a very loose uniformity among different medical schools. The need for variety is fully recognised, and few rules can be drawn up which the exceptions will not immediately prove. Yale, for example, is a mildly heterodox school, with its emphasis on free time and elective classes, its outlook towards examinations and its compulsory "projects." These projects are fourth-year research problems tackled and written up by the individual student on any approved subject, and they are a means of extending the scientific discipline into the clinical surroundings of the senior year.

The background of the new teaching experiments is thus not a homogeneous one; each school, and indeed each department, has its own particular outlook and usually a very considerable measure of freedom to develop its individuality—which is as it should be.

The Trend of Experiment

Berry (1953) has discussed some of the American teaching experiments, which fall roughly into two categories. The first is expressed in the word "integration"—integration of the work of one basic-science department with that of another, or with the clinical material. The second aims at introducing the student to the patient in the patient's natural surroundings by means of some sort of "family care" programme, sometimes reserved until the final year, but sometimes advanced to the first.

The first idea is not new; integration has been the aim, in a mild way, of several schools for many years, and it has sometimes been given up as impracticable. It is now being given the fullest possible trial by Harvard (for graduate students only) and Western Reserve; it remains to be seen whether it will survive this treatment.

The second idea apparently springs from an attempt to prepare the student for the responsibility which must be his if he accepts the World Health Organisation's definition of health as "a state of complete physical mental and social well-being." The idea has not commended itself to everybody: Loeb (1952) considers that "it seems unwise to sacrifice the limited and precious time in order to observe those aspects of the practicalities of home care which are more effectively mastered by the application of common sense and intuition in the course of long continued responsibility for the care of patients." Nevertheless, it has a foothold in many institutions.

Colorado

At Colorado the "family training programme" takes the form of a general clinic in which the student is attached to individual patients rather than to any particular ward or department; he follows the patient round the necessary departments of the hospital and possibly also to his home. But this is in the clinical years, and does not fall within the scope of this article. The integrative idea, however, is also at work, and Colorado merits separate consideration because of two unusual features of the basic-science programme. The first of these is a heterogeneous collection of lectures, conferences, tutorials, and demonstrations called "an introduction to medicine as human biology," which is an inter-departmental affair occupying some 48 hours in the first year. The dissection of a fœtus is used to introduce ideas of growth, which are then developed by radiologists, pædiatricians, and psychiatrists. The second part of the series attempts to show, by discussion and clinical demonstrations, how the basic sciences contribute to knowledge of disease.

The second feature is a fully integrated second-year course on infectious disease, run by the department of microbiology. The exact amount of intervention by other departments varies from year to year, but the following figures are an

example: bacteriology, 199 hours; clinical pathology, 54; public health, 21; pædiatrics, 11; medicine, 8; surgery, 1.

Both these ventures may be considered as going concerns which have proved their value but have not become rigid in structure as a result.

Western Reserve

In contrast, the Western Reserve experiment, which involves a reorganisation of the whole four-year curriculum, has only just completed its first year, so that the programmes for the second and third years are still in the planning stage. It would be unfair to pass judgment on it so early, particularly as its sponsors stress that they are learning by experience.

The chief innovation, perhaps, is integration on the heroic scale. Teaching is done, not by departments, but by systems, each subject being taught by a committee of the teachers most nearly involved. Thus the committee teaching the nervous system consisted of 5 anatomists, 2 physiologists, 2 neurologists, a psychiatrist, a pharmacologist, a biochemist, and an assistant from the audiovisual television laboratory. The course begins with an introductory period dealing with the energy, structure, growth, and development of the cell, after which the systems are considered separately, starting with locomotion. The class dissects briefly the appropriate regions of a stillborn baby to get a general anatomical orientation, but detailed dissection is reserved until the appropriate clinical subject is reached; thus, the dissection of the adult limbs is to be related to orthopædic surgery, and so on. Instead of basic science being concentrated into the first two years, it is to continue in diminishing amount throughout the four years.

Correspondingly, clinical work is introduced in small amount from the beginning, and increases in quantity throughout the four years. The first-year student is soon present at the birth of a baby, and he sees the mother and the rest of the family at home later. He is expected to find out about the family problems, both social and medical, and discusses these with a "preceptor," whom he shares with 7 other students. The preceptor acts as a combination of friend and counsellor, and meets with his flock once weekly to discuss their technical and personal problems. The psychiatric staff participate in regular conferences at which the student presents an account of his particular family to his colleagues, and there is a concurrent course of "psychobiological" instruction.

Each student chooses a "project" in the Yale manner, but, in contrast to Yale, this is worked out in the latter part of the first year under the supervision of a "project director," who is usually a member of one of the basic-science departments. The project may use up much of the generous allowance of "free time" in which the student can, at his own discretion, attend clinics, work on his project, complete his laboratory experiments, and so on. Finally, each student has a tutor, chosen by himself, to whom he can take his individual and professional problems if he so desires.

Practical work is done in an all-purpose laboratory, adaptable to any type of experiment; there will eventually be one of these laboratories for each year. The emphasis is on the demonstration of principles, and students usually work in groups; not every student performs every scheduled experiment, but the results and details are discussed in class-conferences. All lectures are given in the same lecture-room, the teachers coming to the students rather than the students to the teachers.

One source of anxiety is the amount of time required of the faculty, and undoubtedly this is at present enormous; many of the teaching staff are submerged in the experiment, and research work has suffered in consequence. But after the present planning phase is ended, it seems likely that less, not more, teaching effort will be needed, though the individual may have his teaching load spread throughout the year instead of getting it over in one concentrated effort. The amount of material taught has been drastically reduced, by about 25%, and the reduction has borne more heavily on the practical work than on the lectures and conferences, the proportion of which has thus tended to rise.

An adequate picture of Phase 1, as it is called, is impossible to give in a small compass; it remains a stimulating experience to observe, and the students appear to be taking to it well. Possibly they are encouraged to give of their best by the almost continuous presence of visitors from other institutions and other countries in the back rows of their lecture-room; a feeling that people are interested in their conditions of work is known to step up the output of workers in factories, and there can be no doubt in the students' minds that Western Reserve is interested in its workers. This consideration must be borne in mind when the time comes to assess the permanent value of this and other experiments of the kind.

Conclusions

There is a tendency everywhere, and perhaps particularly in America, to equate what is new with what is good, and to confuse the means with the end, especially where the means are striking and dramatic. The present trend is to concentrate on the teaching and to neglect the teacher, on the assumption that if only the right *methods* can be found all will be well. This seems to me to put the cart squarely in front of the horse. Given good teachers and good students, it does not matter much what passes between them; the product will also be good. Teaching is a thing done by individuals to individuals, and method must always be secondary. "Sir," said our old friend Dr. Johnson many years ago, "it is no matter what you teach them first, any more than what leg you shall put into your breeches first."

The modern face of basic-science education in the U.S.A. is perhaps the result of treating symptoms rather than causes; and, seen in this light, the experiments in educational method may be considered simply as adaptations to local conditions, and not necessarily of universal application. For example, the careful suppression of competition in examinations is merely the remedy for bad attitudes developed in college and high school, and the objective examination is one answer to the problem of the mass correction of examination questions. Similarly, the idea of "integration," the early introduction of clinical material, and the rise of "psychobiology" might be related to the fact that a majority of basic-science teachers have had no clinical experience.

But it seems to me that the main problem in medical education everywhere is to bring about a more general appreciation of the value of teaching. Teaching is not just a bagful of technical tricks, nor is it a tiresome waste of time. It is, or it ought to be, the reverse of a coin whose obverse is research. It is true that nowadays nearly every teacher is also a research-worker, but it is the research that gets the pay and the glamour, and this breeds the idea that going into the anatomy dissecting-room or the physiology lecture-theatre is an unwarrantable interruption of important work. Until people realise that to stimulate others to find things out is as useful as to find things out oneself, and that the two jobs should go together and not in separate compartments, the teaching of basic science will remain a profession in which deficiencies will have to be patched up and mistakes made good, in America as well as in the rest of the world.

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BACK TO FRONT?

A POSSIBLE REORIENTATION OF THE MEDICAL CURRICULUM

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MOST of those who teach medical students criticise the curriculum: their strictures often have a familiar ring—that the student is taught too few general principles and too much detail. Any prospect of agreed reform fades as it becomes clear that each critic assumes that while he limits his own teaching to general principles his colleagues have an insatiable appetite for unnecessary detail.

Amid the ensuing squabbles, the structure, as contrasted with the content, of the curriculum escapes notice, though, since we need go no farther than Paris to find a radically different system in force, there is obviously nothing sacrosanct about it. I am here concerned with the ordering of the course, and I will argue that at present it is back to front in the sense that the best arrangement of subjects would be nearer the inverted than the existing order.

We tend to think of the preclinical subjects as a logically necessary basis for the clinical ones. This belief helps to reconcile the student to the postponement of the study of patients that is his natural goal, and to give point to the preclinical teachers' efforts; moreover, it is flattering to the clinician to feel that his subject is at the apex of a hierarchy, and that he has transcended the field of study of, say, a mere biochemist. So it is not surprising that the notion should survive; but it is clearly fallacious, if only because medicine and surgery were developed to a useful degree before physiology and biochemistry were thought of.

A Sufficient Basis?

Surgery arises from the almost instinctive reactions of closing a wound, splinting a broken bone, and anticipating the bursting of an abscess. These responses were developed as a systematic craft, much as agriculture developed without having to wait on plant physiology. Medicine perhaps demands a rather more sophisticated approach, but again the essential recognition of disease patterns, including their post-mortem appearances and any modification of their natural history by environmental change, does not demand any knowledge of, or indeed any interest in, the mechanism underlying them. In this way the common fevers were distinguished and remedies such as quinine and digitalis recognised. It is true that much useless and even harmful therapy was accepted, but this was due not so much to a lack of pharmacological theory as to the absence of any technique of therapeutic trials.

Nor did the development of the preclinical subjects alter the theoretical basis of medical practice, which was and still is nosography—i.e., the delineation of the features and natural history of recurrent patterns of disorder. Without adequate nosographical knowledge, confident diagnosis and reasonable management are impossible; with it, no other knowledge is required—one does not expect much help from physiology in the diagnosis of measles. Certainly many diagnostic procedures depend on elaborate chemical and other techniques for their performance, but their interpretation is usually a matter of applying established correlations between the results and the other clinical features, and is in no way dependent on any understanding of the techniques used or the mechanism underlying the changes. For example, the clinician knows that there are typical alterations in the level of blood-cholesterol in various disorders, and he may use this knowledge to support or combat a proposed diagnosis. Knowledge of the chemical details would not enhance the value of the test, nor does the present almost total ignorance of lipoid metabolism diminish it.

Of course, modern clinicians have studied physiology and may feel that they make use of their knowledge in their practice. But the frequency with which they entertain out-dated or misconceived physiological notions without detriment to their professional success shows that such notions, be they right or wrong, are largely irrelevant.

We may conclude that there is a body of knowledge which is independent of the preclinical subjects, and which forms the necessary, and, in principle, sufficient basis for the practice of the clinical crafts. There is no limit to the scientific development of this knowledge, which is essentially statistical and which will no doubt become increasingly mathematical. We are already familiar with the formalisation of clinical trials, and such devices as the use of discriminant functions in diagnosis are likely to become more common.

A New Emphasis on the Preclinical Subjects

If then the scientific basis of clinical practice is logically independent of the preclinical subjects, should these be excluded from the course? On the contrary, they should be extended and no longer be considered as preclinical. Far from seeking to depreciate, my proposal is to enhance their status, and to show them as a flower rather than as a root of medical knowledge.

Physiology, biochemistry, and morbid physiology—that is, those aspects of clinical studies concerned with the mechanism rather than the delineation of disorder—have a more subtle relation to practical medicine than is commonly thought. If medicine were an unchanging body of knowledge with no possibility of therapeutic advance, then nosography would be practically as well as logically sufficient. But of course this is far from the case. Medical knowledge increases rapidly and new ideas have always to be entertained and assessed. In these circumstances the value of the study of mechanism is twofold. The positive value is the assistance it gives in organising (and so remembering) the flow of new facts and in suggesting possible therapeutic applications for clinical trial. But the negative value is also important. In medicine we are confronted with a large body of contingent fact with little cohesion or apparent organisation. Such a state of things is repugnant to most people, and they will try to weave a web of explanation around the facts. The circumstances of the practice of medicine: the necessarily dominant relationship with the patient; the need to adopt a confident attitude and a definite policy, often in almost total ignorance; and the necessity of satisfying the patient and his relations with an explanation of the illness that gives nothing away: all these diminish the critical and encourage the mythopoetic faculties. Often what was originally intended to sooth a patient is in time accepted by his doctor as a substantive assertion, and with the years an exuberant growth of fantasy chokes the mind. Fact and hypothesis become hopelessly confused, while imprecision is excused with the cliché that medicine is not an exact science. This state of mind hinders the assimilation of new knowledge, but fortunately it has little effect on the application of old, and many doctors carry on successful practice in a state of intellectual disarray scarcely suited to what still claims to be a learned profession.

Experience shows that the best intellectual weed-killer is the habit of scientific method. Let the clinician theorise by all means, but let the theory be sufficiently precise to yield consequences potentially vulnerable to experimental attack. What is needed to inculcate this attitude is not an early unmethodical cramming in some accredited "scientific" subject, but the experience of dealing with the real problems of the clinical subjects

in a scientific spirit. For this the alternatives are the rigorous statistical development of nosography, to which only a few are temperamentally suited, and the serious study of morbid physiology in the latter part of the course.

The Best Order

What then would be the best order of the subjects? Some school physics, chemistry, and biology would be needed as at present, with possibly rather more mathematics. The student would begin straight away on his clinical subjects (as in France) with, at the same time, a very simple anatomy and physiology course of "first-aid manual" type. The clinical subjects would be arranged in order of difficulty: obstetrics, minor surgery (including eyes and ears), acute medicine (including skins), major surgery, and chronic medicine. Morbid anatomy, histology, serology, and so on would be taught, primarily as nosographical extensions, along with their appropriate clinical subjects. These arrangements might occupy the first third of the course. At the end of that time, the student should have some idea of what medicine is about and a fair practical knowledge of the common disorders. He would be an up-to-date version of the apothecary's apprentice up to "walk the hospital."

Practical clinical work would continue throughout the remainder of the course, but it would be supplemented by studies of mechanism. This would immediately necessitate an increase in the student's knowledge of normal physiology, and the teaching of this subject would proceed simultaneously, the natural approach being from the study of the total response of the body to that of the system and of the organ. Similarly, biochemistry, pharmacology, and bacteriology would come into the picture.

The general plan would be that each subject was introduced as it became necessary for the proper theoretical treatment of the initially clinical problem, but that the subjects would be pursued far enough to attain some form and cohesion. The student would in this way more or less recapitulate the main line of the historical development of medicine. The emphasis on the "preclinical" subjects would certainly change, and it might be that certain aspects at present covered could not be fitted in. The physiological teacher might have to abandon his belief in the superior moral value of obsolescent techniques, and his liking for unsuccessful repetitions of classical experiments. On the other hand, the student might find time to develop physics and physical chemistry to the level now necessary for medical research.

TEACHING OF SOCIAL AND PREVENTIVE MEDICINE

SOME RECENT DEVELOPMENTS

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THE scope of the courses in social and preventive medicine in many British medical schools has been considerably enlarged during the last ten years. A recent report from the Royal College of Physicians (1953), referring to conditions in the provinces, said:

> "In almost every school, the curriculum in social medicine has been greatly expanded during the post-war years . . . with the exception of Oxford, there is now a separate Department of Social and Preventive Medicine in every provincial School."

In the United States of America, a similar expansion in the teaching of social and preventive medicine has taken place. The committee on environmental medicine of the Association of American Medical Colleges (1948) has done much to achieve this and, in coöperation with the American Association of Social Workers, has published a detailed account of the teaching of social and environmental factors to medical students in the United States. In November, 1952, teachers of preventive medicine from all over the United States and Canada held a conference at Colorado Springs with medical-school deans and other medical teachers to discuss the teaching of preventive medicine; and a preliminary report of this conference has now appeared (Hubbard and Clark 1953).

The development from Public Health to Social and Preventive Medicine has been rapid and uneven, and there are still many different opinions about what should be taught, how it should be taught, and who should teach it. In a recent visit to 15 medical schools in Great Britain, 16 in the United States, and 1 in Canada, I was able to see something of the developments that are taking place. In discussing these, it is convenient to regard social and preventive medicine as resting on a tripod consisting of the social aspects of clinical medicine, epidemiology, and public-health administration.

Social Aspects of Clinical Medicine

The regeneration of interest in social factors in medicine among clinicians, most notably the late Prof. John Ryle, has done much to transform the teaching of public health. By linking this teaching to actual patients and by pointing out the part that social factors have played in ætiology and will play in prognosis, the subject has been made more real and interesting. In some British schools it is left entirely to the clinician to introduce the social aspects into his bedside and outpatient teaching or to the almoner to cover in a short course of lectures. In others, a member of the department of social and preventive medicine teaches it, using either his own clinical material, patients from research surveys, or patients "borrowed" from other departments. In several schools it is taught by means of social medicine case-conferences in which clinicians and members of the departments of social and preventive medicine take part.

The case-conference method has been widely adopted in the United States. A typical seminar at the Massachusetts General Hospital consisted of a group of 8 final-year students sitting round a large table with the physician in charge of the case, a surgeon interested in social medicine, a psychiatrist, and the hospital almoner.

The use of a team of teachers, although expensive in time, has considerable value in that the student learns how to bring to bear on one patient knowledge from various fields. It has the added advantage that the student is not likely to get an exaggerated view of the value of any single approach in medicine. In the United States, a typical team in social-medicine teaching contained a physician, a psychiatrist, an almoner, and a representative from the department of preventive medicine. Obstetricians, pædiatricians, and public-health nurses also occasionally took part.

Some of the most effective teaching in the social aspects of clinical medicine is being done in the United States by using families in their homes as "clinical material." This permits the actual observation of living conditions in relation to health, the examination of normal healthy people, and the study of disease in its earliest and therefore most preventable stages. Families are allocated to students, through outpatient departments or the public-health service, for long-term study. In the majority of cases, the families are on social relief or are in the lower income groups and have no regular family doctor.

SOME AMERICAN EXPERIMENTS

At Western Reserve, an extremely interesting experiment in the integration of the basic medical subjects with clinical medicine is proceeding.

At the beginning of his course, the student makes a study of a patient in the late stages of pregnancy, who is selected by the almoner in conjunction with the obstetric resident. It is explained to the patient that the student is a "doctor-in-training," and that his job will be to keep an eye on the family and to give advice after consulting with his hospital instructor, as and when necessary. The student then visits the patient at home, is present at her delivery in hospital, and visits the home at monthly intervals subsequently. In the early stages, it is intended that he shall be mainly concerned with the nutrition, growth, and health of a normal baby. From this focus, he will gradually extend his responsibility to other members of the family. This programme has now been in operation for one year and the extension of the student's rôle to general family health adviser has apparently taken place quite naturally.

It is intended that the students shall continue to visit their families about once a month during the whole of their four-year medical course. Although some of the first class of students were apparently rather apprehensive of the responsibility thrust on them so early in their career, I gained the impression, in talking to some of them, that they had accepted it successfully. Knowing so little, they do not attempt to give any medical advice without first discussing the question with their tutor, whom they meet in groups of 8 at weekly intervals. As might be expected, they sometimes encounter situations of mental strain and incompatibility in the families they visit; and some instruction in psychiatry is given in the first year to help them to understand these conditions and to learn from their experience. (In the United States, the students have usually completed a four-year college course before starting in medical school, so at this stage they are therefore 22 or older.)

Periodically, the students give an interim report on their family studies to the whole class. On these occasions, several members of the faculty are present and the report is commented on by the teachers whose interests are mainly involved.

At the University of Pennsylvania, another programme designed to enable the student to study a single family over a long period of time has been in operation for four years.

This is under the direction of the professor of public health and preventive medicine. The department of psychiatry plays an important part and it is also supported by the professors of medicine and surgery. In this programme, the student becomes, in his first year, health adviser to a family selected by the hospital social-service department. The families are told that the student will be able to help them in their relations with the hospital. The student does not give medical care. If this is required, the family doctor is called in or the patient referred to the hospital outpatient department. This decision is largely made according to the patient's ability to pay, and serves to introduce the student to the question of the cost of illness and how it should be met—a very lively issue in the United States. There is little doubt that, through this course, the student learns the meaning of the doctor-patient relationship and of medical responsibility at an early stage.

A mother telephoned her "doctor-in-training" to ask him to come and see one of the children whom she thought had measles. The student who was in his first year, in some trepidation, went to his instructor for advice. The latter advised him to go to the library and read up measles and then go along to this family. Having spent two hours in the library reading up measles, he probably knew as much about the disease as anyone else in Philadelphia on that day, and had no difficulty in confirming the mother's diagnosis and giving general advice on management, and the symptoms, signs, and treatment of measles were permanently imprinted on his mind.

The students are encouraged to visit social agencies that may be able to help their families, and in this way gain a first-hand knowledge of what social services are available and what they can do. They are also encouraged to make a "health inventory" on the other members of the family: they record the past medical history and previous immunisations and they visit school medical officers and industrial medical officers to inquire about the findings at previous examinations.

At Western Reserve and Philadelphia, the emphasis in the family studies is on normal growth and development and on the prevention of disease and its complications. At Boston University Medical School and at the Medical College of Richmond, Virginia, two rather different plans, designed to utilise patients in their homes for teaching purposes, are in operation.

In both cases, the teaching is incidental to the provision of a home-care medical service for indigent patients. The student, in his final year, acts as a general practitioner for a month. He answers calls that come into the hospital and makes about 10 home visits a day. All new cases are visited by the hospital resident or a visiting physician with the student after his initial visit. Cases are presented by students and discussed at weekly conferences in which the clinician in charge, the social worker, a psychiatrist, and public-health nurse are usually present. At Boston, the professor of preventive medicine is in charge of this programme; at Richmond, a hospital physician. The students I spoke to were enthusiastic about the schemes.

A "comprehensive medical care programme" at Cornell is intermediate between these two types.

Here, fourth-year students are allotted, through the outpatient department, a family, containing a case of chronic illness, to study for six months. The student visits the home and acts as the family health adviser. At the end of this period, selected students report their studies to the whole class. Another interesting development at Cornell was an elective course to study a particular health question in the community. One student gave an account of his investigation of the problem of drug addiction in juveniles and its treatment in the federal Riverside Hospital, New York. The point was made that drug addiction had much in common with an epidemic. The disease was found only in certain districts and spread by contact with existing cases.

At Cornell and also at the New York State University College of Medicine, the university department of preventive medicine had its headquarters in a New York City "health centre." This close relationship with the city public-health department meant that students were readily able to attend and take part in the preventive services of the city.

I saw several other excellent teaching programmes in the United States and in Toronto where families in their normal environment are being used for teaching purposes.

GREAT BRITAIN

In this country, about half the medical schools now make arrangements for students to spend varying periods with general practitioners to observe the conduct of general practice. In Edinburgh, this process has gone further (Scott 1953): here, a general practice has been brought into such close association with the university as to be in fact an integral part of the medical school, and the cost of the practice in excess of its income from the National Health Service, is shared between the university and the Rockefeller Foundation. The course, at first voluntary, is now to be made a regular and necessary part of the curriculum for senior students. Each student is given responsibility for at least one family, and regular case-conferences are held, at which the almoner and health visitor attend.

Epidemiology

The extension in recent years of the principles of epidemiology to non-infectious conditions, such as coronary-artery disease and accidents, has stimulated interest in this subject.

In Great Britain, the subject is usually taught by formal lectures, coupled with vital statistics. In the United States, it is often taught as an extension of the course in biostatistics. At Johns Hopkins, for example, there is a course of 30 lectures and "laboratory periods" in the second year, which seemed particularly interesting. The first part of the course is devoted to instruction in normal variation and its measurement. Amongst other things, students recorded each other's pulse-rates, each rate being measured by 4 different students. They then work out exercises on the distribution of the readings, standard deviation, and observer error. Students also critically examine published papers from the statistical point of view, with special emphasis on the type of paper that describes the efficacy of a new form of treatment. The second part of the course is devoted to epidemiology. From data from actual epidemics, often local ones, the students work out incidence-rates by sex, age, and locality and draw conclusions from them. The practical exercises included in the course make it especially valuable.

Public Health

Every school in Great Britain and North America seems to include a formal course in public health in the undergraduate curriculum. These courses deal mainly with environmental hygiene and public-health administration, and are usually given in the last or penultimate year. The number of lectures varies from as few as 12 to as many as 80. Field visits, designed to show the application of public-health principles—in pasteurising plants or water works, for example—help to enliven the subject, but they are difficult to organise effectively for a large class. In one school in the United States, working models are used instead.

At Harvard, each fourth-year student studies, in the long vacation, the complete health services in a district of his choosing—often the area in which he hopes to practice eventually. He visits general practitioners, hospitals, and public-health departments. At the end of his report, he has to discuss the adequacy of the medical services in the district and point out how he thinks they could be improved. In the same course, formal lectures in public health were largely replaced by meetings of the whole class, which were addressed in turn by 2 or 3 speakers, sometimes with contrasting viewpoints. For example, there was a session on health insurance in which one speaker was a private insurance company actuary; another spoke for the Blue Cross and Blue Shield medical insurance plans; and a third spoke in favour of the Health Insurance Plan of New York. Students asked pointed questions and freely expressed their views.

It seemed a common practice in the United States to invite outside experts to take part in the teaching.

At the University of Minnesota, for example, I heard an excellent lecture by a visiting dental public-health officer on the fluoridation of water-supplies. Here, final-year students are required to write a thesis on some aspect of preventive medicine. Subjects chosen by last year's students included:

The value of anti-rabies treatment.
Maternal rubella and congenital deformities.
Cancer of the lung and smoking.
Contraception.
Cholera.
Epidemiology of the common cold.
The value of tonsillectomy.

In the United States, as here, several departments of social and preventive medicine have found that sociology has a valuable contribution to make to medical teaching and research.

In the University of Colorado Medical School in Denver, for example, where the population includes a large number of Negroes, American Indians, and Mexican Indians, a social anthropologist in the department of preventive medicine is studying and lecturing on the ways in which cultural differences may prevent adequate medical treatment from being carried out. In at least two medical schools, students are required to take a premedical course in sociology.

It is not possible to make any useful comparisons between the teaching of social and preventive medicine in the United States and Britain because I went only to specially selected centres in the United States. In Britain, it is in the provinces where most of the recent developments have taken place. Amongst these developments may be mentioned the holding of regular case-conferences between clinicians and members of the social-medicine department; courses in medical statistics, including exercises in epidemiology; home visiting by students; field visits with health visitors and sanitary inspectors; visits to mines and factories (including their medical departments); the participation of students in sociomedical field research; and the use of general practice for teaching the principles of social and preventive medicine.

Conclusions

I have described some recent developments in the teaching of social and preventive medicine, confining myself mainly to those I have had the opportunity of observing in the United States. Although there are still wide variations in the syllabus in different schools, there seems to be a growing agreement on what a modern undergraduate course in social and preventive medicine should contain. Combining what I believe to be the best in present teaching, I would include the following in such a course:

Public Health

(1) A sufficient number of lectures on the statutory and voluntary provisions for health and social welfare to enable the future general practitioner to use these services fully for the benefit of his patients.

(2) The examination of these services by students at first hand by means of visits with health visitors and sanitary inspectors, singly or in pairs, by "sitting in" with almoners and possibly with other social workers, and, where convenient, by group visits to public-health installations. Field studies by students of special health services in a community as at Cornell, or of total health services as at Harvard, might take the place of some of this practical work.

(3) Lectures on the relation between environmental conditions and health including industrial disease and its causes, together with visits to factories and mines where possible.

Epidemiology and Biostatistics

(1) A course to demonstrate the relative frequency and importance of different causes of illness and death and their incidence and trends, to give the student a sense of proportion and to enable him to see the problem of disease in society as a whole.

(2) A short course in elementary biostatistics to demonstrate the wide range of normal and to help the student to acquire a critical faculty in the examination of medical evidence and literature.

(3) Practical exercises in both courses.

The Social Aspects of Clinical Medicine

(1) The use of hospital patients to demonstrate the social aspects of disease. Such teaching is probably best done by means of case-conferences in which the almoner, and possibly a doctor with special knowledge of psychological medicine, take part in addition to the clinician and a representative from the department of social and preventive medicine.

(2) The use of families in their homes to demonstrate:

(*a*) The relationship between bad environmental conditions and ill health.

(*b*) The spread of infection in the home—e.g., acute specific fevers and gastro-enteritis—and their prevention.

(*c*) The practice of vaccination, inoculation against diphtheria and whooping-cough, Mantoux-testing, and B.C.G. inoculation.

(*d*) The diagnosis of disease at an early and remediable stage.

(*e*) Problems of infant feeding and management.

(*f*) Behaviour problems in children and the relation of these to parental neurosis and family tensions.

(*g*) The care of the aged at home.

(*h*) The use of voluntary and statutory social services in the prevention and management of illness in those living at home.

(*i*) The value of routine health examinations and health education.

It is a strange thing that such a large and important section of medicine as general practice should have remained relatively remote from the influence of the universities and medical schools and that the contribution that it might make to medical education should have been until recently largely neglected. The creation of university general practices analogous to university hospitals, such as has been accomplished at Edinburgh, would I believe provide valuable additional opportunities for teaching social and preventive medicine and would improve the balance of medical training as a whole.

I am greatly indebted to the trustees of the Rockefeller Foundation for the grant which enabled me to spend three months in the United States and Canada, observing methods of teaching social and preventive medicine, and also to the University of Sheffield for defraying the cost of visits to various British medical schools.

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MODELS IN MEDICAL TEACHING
WITH A NOTE ON THE USE OF A NEW PLASTIC

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THIS paper is intended to outline the various types of model which may be used in medical teaching, together with some of their applications. Details of preparation will not be described except in the case of one of the new plastic materials (' Fibrenyle ').

Although visual aids are being increasingly used in this country and in Europe, most of these, especially in the case of models, have been prepared independently by commercial firms. In many instances such commercial products are useful, but they are rarely designed as an integral part of a particular system of instruction. Material of this kind should be prepared within the medical school by the department of medical illustration which would collaborate at all times with the teaching staff. Full advantage can then be taken of it, both for the development of new techniques and the careful integration of its products into medical and biological teaching. An example of this system is seen in the department of medical illustration at Guy's Hospital Medical School.

Until comparatively recently the literature in this field was confined to short accounts of technical methods, but in the last few years a number of American papers have appeared reviewing and attempting to evaluate the use of visual methods in teaching. There is no doubt that much of the subject matter of the medical curriculum is more easily understood if presented by such methods.

In an inquiry into visual instruction in medicine, Jones (1946) found that during the war, when an increased number of medical personnel was needed in the United States, the training of medical students could be greatly accelerated by the application of visual aids on a large scale. These included motion pictures, film strips, lantern slides, drawings, photographs, models, charts, posters, and even cartoons and comic strips.

Such visual aids supplement the study of natural material, and may be used as a substitute for it only in situations where the use of actual specimens is impracticable. The appreciation of three-dimensional structure is an important problem in medical and biological studies especially where work on specimens is difficult and time-consuming. In such instances the use of models may be very effective, and it is proposed to discuss them with regard to their particular application in teaching, as well as classifying them into types according to the method of preparation.

Use of Models

Models of Small Structures

Examples of these models are those of the middle and internal ear, the larynx, and the eye. The use of models in the study of these regions has been recognised for many years, and such models, usually in moulded papier mâché, are produced by a number of commercial firms. They are strong enough to be handled by the student and they can be taken to pieces, thereby demonstrating the relations and orientation of the various structures.

Histological and Embryological Models

Models are useful in demonstrating histological and especially embryological structure. Much of the original material in these subjects is examined in the form of microscope sections, and considerable experience and practice is required before a three-dimensional picture can be built up from these two-dimensional studies. This is particularly so in embryology, where students often have difficulty in learning to use serial sections. Appreciation of embryonic structure is further complicated by the changes which take place during development; illustration of these changes necessitates either a series of models showing different stages, or action models which can be manipulated.

Models demonstrating the histological structure of the liver and kidney have been successfully used. These may be static, showing the general architecture of the tissue in three dimensions, or dynamic, as in the case of an action model designed and made by Richardson (1951) which was used as the basis of a film illustrating renal blood-flow.

Embryology is the field par excellence where the use of models can simplify teaching problems. Before the second world war the German firm of Ziegler made excellent wax models which are still in use in many medical schools. This firm produced several series of static models showing the different stages in such processes as the formation of the embryonic folds and the development of the heart and the urogenital system.

Action models are particularly applicable to developmental studies and in many cases may be purely schematic. This is because it is often unnecessary, and indeed impossible, to teach a completely detailed picture of embryonic structure and change. A large part of the importance of embryology to the medical student is the light that it throws on adult anatomy, both normal and anomalous. The principles necessary to an adequate understanding of this developmental basis can usually be conveyed in a simplified form, an example of which is seen in considering the mechanism of rotation of the gut. Some understanding of this phenomenon is helpful

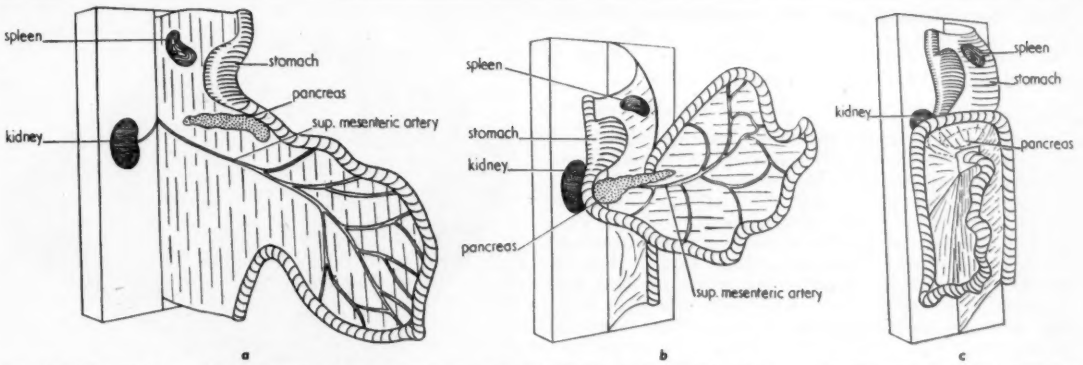

Fig. 1—Action model of the diagrammatic type, illustrating the main stages in the rotation of the gut (after Bayon 1912) : (a) before the commencement of rotation ; (b) changes in the position of viscera attending rotation of the stomach ; (c) showing position of viscera after rotation is complete.

in appreciating the adult position of the abdominal viscera, and the various anomalies which may occur. It can be admirably demonstrated by the use of a diagrammatic action model similar to that designed by Bayon (1912; fig. 1).

Plasticine models which can be manipulated to show embryonic change have been successfully used by Abercrombie (1951) to show the development of the urogenital system. Such temporary models also have the advantage that they can be modified in the light of teaching experience, and where they are particularly successful, more permanent versions can eventually be prepared. Motion pictures may be based on action models, as in the film described by Markee (1946) of the formation of the layers of the scrotum during the descent of the testis and the alterations produced in them by the various types of inguinal hernia.

Clinical Models

These may be used for demonstrating and practising certain clinical manipulations. A series of models was described by Seigneux (1946) with which the mechanism and management of labour in the different types of presentation could be demonstrated. He also designed models for the practice of laryngoscopic examination and catheterisation. Most obstetricians find the use of the pelvis and fœtal doll of assistance in teaching, and the possibility of developing other working models in the clinical field could be investigated. In the operating-theatre, for various reasons, students often miss important points. Bulbulian (1945) found that models demonstrating steps in surgical procedure were valuable in cutting down teaching time, "... because such models can eliminate the irrelevant and accentuate the essential points of the technique."

One of the problems of clinical teaching is that patients rarely present themselves in an order suitable for systematic instruction. While models and other visual aids should never be allowed to supplant examination of the patient, they can enable the tutor to give a useful systematic account of a group of injuries or diseases.

Simplified Models

Most models have to be simplified to some extent, even when a realistic approach is intended, but in some instances detail is deliberately omitted. This may be because the models are to be used for teaching to a different standard—e.g., to nurses, as opposed to medical students. On the other hand, the model may be constructed as a three-dimensional diagram intended to focus attention on some principle of structure or function, as in the case of the model already mentioned which was designed to illustrate the mechanism of rotation of the gut.

This classification is obviously far from exhaustive and is intended to outline the kind of teaching situation where models are useful as time-saving aids. Models are not a universal panacea to difficult teaching problems, and in preparing them the exact aim of the lecture or demonstration must be carefully borne in mind. The design should be based on an analysis of the features to be presented, together with a consideration of their relative importance. In the latter connection, the use of colour plays an important part in focusing attention on the essential points.

Methods of Preparation

Depending on the method of preparation, medical models may be divided into types (Bulbulian 1945). An outline of the method of production of the principal types will be given, together with some of the advantages and disadvantages of each.

Freehand Models

In this type the structure is modelled directly in plasticine, wax, or possibly plaster-of-paris. This method is difficult and time-consuming for the production of realistic preparations, but still has some applications in spite of the improvements in casting technique. It may be used for some schematic models, or for models intended for temporary use only.

Direct Casts

This is the simplest method for the accurate reproduction of specimens. A mould or negative cast is first of all made of the specimen to be reproduced. This is usually done by applying the impression material directly over the specimen. From this mould a positive cast, the model, can then be produced. Apart from accuracy of reproduction, this method has a further advantage in that several duplicates may be made from the same mould. With the discovery of new plastics, the range of materials for casting has increased and the method has been used for preparing bone models using methyl methacrylate (Blaine 1946, *British Medical Journal* 1950) which reproduces the natural specimen with a fair degree of accuracy. Such skeletal models are now being made on a commercial scale.*

In the case of some hollow anatomical structures no mould is required, for the specimen itself acts as a mould. The anatomy of the trachea and bronchi can be demonstrated by injection of a suitable material into the trachea, and then dissolving the soft tissues

* Educational and Scientific Plastics Ltd., 392a, London Road, Croydon, Surrey.

from the solidified cast with appropriate solutions. Other situations where this technique is applicable are the ventricles of the brain, the pelvis and calyces of the kidney, and parts of the vascular system.

Indirect Casts

This method is used where direct casting of the specimen is not possible or is unsuitable. This may occur, for example, in preparing models of stages in operative technique, or in cases where the final model is to be based on a study of several specimens. The subject is first of all modelled in clay or other suitable material; various studies may be made, and any modifications to the design should be carried out at this stage. The final model is then prepared by casting from this preliminary clay model, using a similar technique to that described for the direct cast.

This indirect method is very flexible, for the models may be made at various magnifications and in simplified or diagrammatic form as required.

The chief drawback to the technique is that it is very time-consuming. The preparation of the original clay model is difficult, especially in the case of microscopic structures where the available data are often in the form of serial sections and two-dimensional drawings only.

Composite and Miscellaneous Preparations

For some types of models a combination of several techniques may be needed. A cast, direct or indirect, may be used as a basis, and further detail added in other materials. Sometimes actual specimens—e.g., bones—may be combined with models of surrounding tissues. An example is a skeletal model of the leg in which the various muscles and tendons are completed in diagrammatic form by the use of flexible plastics.* A similar schema of the thigh, using the natural skeleton and showing the muscles in perspex, has been made for the museum at University College. This has been found useful by students in learning to visualise the grouping and relationships of the thigh muscles.

Fig. 2—One of a series of three models made in 'Fibrenyle,' illustrating the development of the body cavities. Dimensions: 21 × 15in. (based on illustrations from Human Embryology by Hamilton, Boyd, and Mossman 1944). (Model by P. Thilesen.)

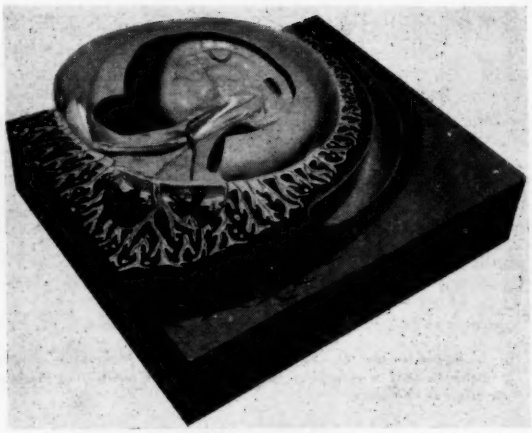

Fig. 3—Model in 'Fibrenyle,' demonstrating the relationships of the extra-embryonic membranes. (Model by P. Thilesen.)

Reconstruction from Microscope Sections

In principle this technique consists of making projection drawings, on card or other material, of serial sections of the structure or organism to be modelled. The "waste" parts of the cards are then cut away and the series can be glued together to form a scale model. Many modifications and improvements of this basic method have been described.

Although a useful tool for research, the results produced are not always suitable for teaching purposes, in addition to which the preparation of such models is a very laborious procedure.

Materials

It is only possible to indicate a few of the materials in current use. Details of techniques can be found in such publications as the *Journal of Technical Methods*.

Much depends on the nature of the model and its method of preparation, and it is occasionally necessary to incorporate unusual materials, especially in models of the schematic type. In general, however, the substances used have some kind of setting property, that is, they are malleable at first and then harden, either at room-temperature or after the application of heat. Transparency or translucency are useful qualities for some purposes, while lightness and strength are necessary in the case of models which have to be frequently handled.

As in so many other fields, the advance in the manufacture of plastic materials is beginning to make itself felt. In the design and preparation of visual aids a number of these substances have come into general use. The series of 'Marco' resins for embedding gross specimens, the use of methyl methacrylate for the preparation of realistic bone models, and the introduction of fibrenyle for various purposes are a few examples.

It seems likely that a range of substances suited to the needs of the medical illustrator will gradually come into use. The understanding of the chemistry and the problems of synthesis of these materials is now so advanced that in some cases substances can be designed to fulfil specific needs. It may be that in the future it will be sufficient to indicate the desired properties to

the chemist, and a plastic will be produced, tailored to the requirements of a particular problem.

But at present many of the older substances are holding their own. Those commonly used for the preparation of direct freehand models have already been mentioned.

For making moulds, plaster-of-paris is generally applicable, especially where large surfaces are involved, and there is no intricate detail. In the case of delicate structures, or processes which project from the main body, plaster is not always suitable. In such circumstances the use of a flexible material such as gelatin, the synthetic substance 'Vinamould,' or rubber latex enables the mould to be removed from the specimen without damage. It should be mentioned that gelatin cannot be used where the cast is to be in one of the synthetic plastics, owing to the heat produced by the exothermic reaction which takes place during the setting of these substances.

In considering the type of material to be used for the cast, much depends on the desired characteristics of the model. For a realistic effect, especially in the case of soft tissues, wax is good, but has the disadvantage of being easily damaged. Diagrammatic models may be made from papier mâché, which is light, fairly strong, and easy to work. Plaster-of-paris, being breakable and heavy, has only limited applications.

Fibrenyle †

This is a cold-setting plastic with acetone base and is impregnated with nylon fibres. It is produced as sheets about $^1/_8$ inch thick and as "fibrenyle dough." Both forms can be moulded in the cold and set hard in twenty-four hours, giving a strong light structure. Fibrenyle glue can be used for bonding both the fibrenyle and other components used in the model. It is very suitable for the preparation of diagrammatic models (figs. 2 and 3). Fig. 2 shows one of a series of three models which was designed to illustrate the formation of the main body cavities from the primitive cœlom. The model in fig. 3 demonstrates the relationships of the embryo to the extra-embryonic membranes and uterine wall. These models were made for use in the embryology course at University College, and as it was only considered necessary to convey the principles involved, they were made in the form of three-dimensional diagrams. Other requirements were that they should be large enough to demonstrate to groups of about 15 students and light and strong enough to be handled by the students themselves.

After some preliminary trials fibrenyle was found to fulfil these conditions. The models were made as indirect casts and the various structures coloured, using a suitable code. The series was most successful in demonstrating the development of the region, and certainly cut down the amount of verbal explanation usually required. It is felt that the diagrammatic type of model is very suitable to situations of this kind, where an understanding of the broad outline of development is more important than a knowledge of morphological detail.

We wish to thank Mr. D. A. Botherel for photographing the models.

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† Made by Fibrenyle Ltd., 157, Dukes Road, Western Avenue, London, W.3.

ON CASE-REPORTS

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THE case-report, one of the main types of medical article, has been justly described as "the foundation of clinical medical literature" (Fishbein 1948). A case-report may illuminate the pathology, diagnosis, or treatment of a disease, and so be of immediate value to the practitioner; it may also suggest problems that can be studied only by experimental or statistical methods, and thus be the starting-point of a systematic research. The accepted description of a disease is continually changing; each new report modifies some detail of it and shows the need of further reports. The advance of knowledge gives old observations a new meaning and compels fresh studies of the literature. It is therefore desirable to report all cases of unusual interest, and fully enough to allow them to be reinterpreted if necessary.

Case-reporting benefits not only the profession in general, but also those who write the reports. The miscellaneous reading involved in keeping up to date is apt to pall, because we are merely absorbing other men's opinions. It is a relief to vary general reading with the detailed study of a particular topic, and an interesting case of our own provides one. At the end of such a study we achieve a first-hand opinion and can discuss the subject with authority. The fact that we have not time to master many subjects should not discourage us from tackling some—and case-reporting is the only form of medical writing open to many clinicians and pathologists. The fundamental processes of research—observation, bibliography, and interpretation—can be learnt effectively in this way. The publication of a few case-reports is a good introduction to medical writing, even for future experimenters. A good case-report is always appreciated, and requests for reprints may come from any part of the world.

Reasons for Publishing a Case

To be worth reporting, a case must have some feature of special interest. This may be clinical or pathological, and no limit can be set to the features that may be interesting. Rarity is one: the report of a case of a rare disease may catch the eye of a reader who also saw one but did not report it, perhaps because he did not recognise it; it may equally well result in a sharper look-out being kept. In this way a better idea of incidence may in time be gained, and more cases may be diagnosed and treated aright. Other aspects of a case that are often specially interesting are the ætiological, diagnostic, and therapeutic. An interesting case may remain obscure even after careful study, but this fact should not prevent the publication of a report; the best way to advance knowledge is to say what was found and why it was difficult to draw conclusions. If there is a good chance of seeing several cases of a disease within a year, it is best to defer publication until a small series has been studied; if not, there is no point in waiting. Every case of a rare disease should be reported, and hundreds of such cases may have to be reported before the fundamental problems of the disease become clear.

Valuable information is lost through failure to report cases. Francis Bacon (1605) puts this first among the deficiencies of medicine and gives a fair idea of what makes a case worth publishing:

"The first is the discontinuance of the ancient and serious diligence of Hippocrates, which used to set down a narrative of the special cases of his patients, and how they proceeded, and how they were judged by recovery or death. Therefore having an example proper in the father of the art, I shall not need to allege an example foreign, of the wisdom of the

lawyers, who are careful to report new cases, and decisions for the direction of future judgements. This continuance of medicinal history I find deficient; which I understand neither to be so infinite as to extend to every common case, nor so reserved as to admit none but wonders: for many things are new in the manner, which are not new in the kind; and if men will intend to observe, they shall find much worthy to observe."

Collaboration

A case-report can be written by a clinician or a pathologist alone; the clinician can adopt the pathologist's opinions, or the pathologist can abstract the clinical records. But it is better for the two to collaborate, each doing his special work. Their meetings for discussion ensure a more competent and thorough review of a case than either could make alone. Each is apt to underestimate the special skill of the other, and to overrate his ability to comment on matters within the other's province. And similarly when a case has special aspects other than pathological—for example, radiological—collaboration between the clinician and the appropriate specialist is desirable.

Study of the Literature

References are not essential in a case-report, but it is helpful to cite the chief paper or papers on the subject. The amount of reading to be done depends on the state of knowledge of the subject and on how interested the author is. The first few papers read may give all the essential information, but if strong interest has been aroused, the author will go into the subject more deeply. The idea of compiling a complete bibliography of a limited subject is sometimes attractive; it is doubtful whether this idea can be realised, because many papers probably escape listing in any index. Even if a complete list could be made, many of the papers would probably be unobtainable. These difficulties are less serious than they may seem, for the best papers usually appear in the best journals, which are in every medical library. Every important aspect of a subject is likely to be mentioned in the first fifty papers read, and further reading may add little new information. Many of the papers, though interesting, will not be worth quoting, and the list of references in the reporter's own article should be short—say, up to twenty items. The point of wide reading is not to collect as many references as possible, but to have many papers to choose from; the author in this position can feel certain of finding the best. Excellent advice on finding the literature is given by Wilson (1952).

Form and Style of the Report

The simplest form consists of a case-record and commentary, without introduction, summary, or references. But the more usual form consists of an introduction, the case-record itself, a commentary or discussion, a summary, and the acknowledgments and references.

Introduction

This should explain why the case is being reported and show its relation to previous cases. Only immediately relevant papers should be mentioned. If any are of special interest, the fact should be stated, since it will help readers. It is particularly useful to specify papers giving reviews of the literature, because they enable readers to get the main facts of a subject quickly. Among the many papers on any subject, a few are usually outstanding; a commendation will help to secure their place in the literature and to ensure them special attention. If there are only a few cases like the one being reported, the records can be summarised in the introduction. The introduction should be purely historical and explanatory, avoiding debate or controversy, which should be confined to the discussion. In most case-reports it is not desirable to give a comprehensive review of the literature; the author who gives one should be satisfied that it is necessary for the advancement of the subject. If there is a recent review in a good journal, it is enough to supplement it by specifying later cases. The introduction should be short—one or two paragraphs suffice.

Case-record

General form and opening.—The case-record should be given in some convenient sequence—e.g., history; examination, including laboratory and other special investigations; operation; description of specimen, with histology; and postoperative history. The topics of this kind mentioned in the report and the space given to them will naturally vary with the case and with the points the author wants to make. The records of the patient will probably contain far more information than is needed for the report, and careful selection is necessary.

The case-record should open with a statement of the patient's age, occupation, and sex (unless this is clear from the occupation)—for example, "a man (or a farmer or a housewife), aged 39." The patient's name and initials mean nothing to the reader and should be omitted. So also should the hospital number; this number may be useful to the author and his local colleagues, but is unlikely to help anyone else.

Routine reports.—Routine pathological and other reports are seldom suitable for publication. Such reports are often made early in the investigation of a case and may need modifying when it is completed; moreover, they have to be issued at a speed that does not always allow of polished phrasing. When a case has been studied in detail with a view to publication, the specialists who have issued routine reports should if necessary be allowed to revise their opinions in the light of all the information available. This is of particular importance when the specialist is not to be a joint author; if not consulted, he may be saddled with opinions that he could justifiably repudiate. A specialist's opinion, in its original or revised form, should not as a rule be quoted verbatim; the text will read more smoothly if the gist of the opinion is given in the words of the person drafting the paper.

Special investigations.—Negative results may be significant, and it may be helpful to say whether particular investigations were made, even if the results were negative or inconclusive; for example, a radiograph of the chest may show some abnormality that cannot be identified, but the reader may be glad to know this, especially if he has met with a similar difficulty. The important point is not whether a result is positive, negative, or inconclusive, but whether the information bears on the case. When listing tests performed, it is not enough to say that the results were within the normal range, because this may mean "normal for a healthy person," "normal for this disease," or "normal for this patient"; to obviate the need for explanation, it is best to give the figures.

Dates, weights, and measures.—As a rule, the intervals between events in a history are more important than dates, and the reader should not be left to calculate from dates how many weeks or months separated particular events. Sometimes a series of dates is easier to follow, especially if the history is long and eventful. If dates happen to be important, as in diseases with a seasonal incidence, it may suffice to state the month and year. If the day must be given, the three-figure abbreviation should not be used; for example, 3.6.49 means June 3, 1949, to an Englishman, but an American would read it as March 6, 1949; to avoid confusion the month should always be named. It may help foreign readers if we give metric equivalents of non-metric data; if we do so, we must beware of abusing conversion tables, which may result in such absurdities as the liver weight expressed to fractions of a milligramme. When there is any

possibility of confusion, "grains" and "grammes" should be written in full; the spelling "grammes" serves to accentuate the difference between these two measures. Abbreviations should be avoided or explained fully; unexplained abbreviations may be unintelligible not only to foreign readers but also to many readers at home.

Histological descriptions.—These should be brief and clear, and detail should always be sacrificed for clarity; elaborate descriptions are difficult even for experts to follow, and convey little or nothing to others. Simple descriptions are essential to the success of short notes that have to be published without illustrations. When illustrations are allowed, the histological description should in effect be a commentary on photographs, and every important point described in the text should be so illustrated. Good photographs add interest to a report and make it easier to follow; they are also evidence independent of the author's opinions and can be reinterpreted if necessary by later workers. These remarks apply also to X-ray films and other photographs.

Commentary or Discussion

Scope.—If the case is complex, it may be wise to devote the entire discussion to it—in other words, to make the "discussion" a commentary in the strict sense; the author may then elucidate the case with reference to the literature, state its lessons for the practitioner, or define the problems it raises. Alternatively—especially if the case is straightforward—the author may deal with the subject more generally, the discussion then taking the form of one or more essays, each on a carefully chosen theme. The author may stress or qualify points made by earlier writers, or discuss entirely new aspects of the subject that his reading and general knowledge have enabled him to recognise. He can do this best by carrying his reading to the limit of usefulness mentioned above.

Sources of error.—The reporter of single cases can make a valuable contribution to knowledge, but he should be aware of certain pitfalls. These are pointed out by Hines and Kessler (1952), whose admirable paper was reviewed by *The Lancet* (1952). In the first place, a report may be vitiated by an incomplete history; Hines and Kessler instance an uncoöperative patient who withheld the crucial information that he was an epileptic. Secondly, an author may make sweeping generalisations unwarranted by the evidence; this of course is a danger besetting all scientific writers, experimenters as well as case-reporters. These dangers can be avoided only by care and common sense. There is no objection to speculative conclusions so long as they are consistent with the evidence and can be tested by future work—indeed, to omit them would often deprive case-reports of much of their value. Excessive caution is a worse fault than excessive boldness; sooner or later a right opinion will be confirmed, and a wrong one will certainly be corrected, but an opinion withheld for fear of possible error is clearly useless to anyone.

Acknowledgments

It is appropriate to express thanks to anyone who has rendered a specific service of importance. Such services include criticism of the manuscript, preparation of photographs or sections, the giving of expert opinions, the performance of tests or other work outside the normal routine, and permission to use the records of a case or to work in a laboratory. It is unnecessary to acknowledge indefinite assistance such as interest or encouragement. Simple thanks are best, and effusiveness is more likely to embarrass than to please.

Preliminaries to Publication

Discussion of case at a meeting.—When the author has reached provisional conclusions, he will find it helpful to discuss the case at a staff meeting or before a society. One reason for doing this is that the author must get perfectly clear in his own mind beforehand what the most important aspects of his case are, and omit details that can appear in print; he must concentrate on making one or two points—all that can be done effectively in a brief address. Another reason is that the audience may be helpful with criticism or information, which the author can take into account when revising the paper.

Criticism of manuscript.—The draft of the manuscript to be submitted for publication should be read by at least one experienced colleague. No author can adequately criticise his own writing, and some of its faults will be evident only to others. It is clearly to the author's interest to have these faults pointed out before the paper is submitted for publication. It is easy to overlook things that ought to be done, to draw wrong conclusions, and to be obscure or wordy. All these matters can be put right with the help of a local critic. Criticism should not be left to the editor of a journal, who cannot usually have a talk with the author. A manuscript prepared with great care and revised after local criticism may be still further improved by an editor; how much he has to do can be seen on comparing the manuscript with the proofs.

Choice of journal.—It is important to decide what group of readers would be most interested, and which journal would be most effective in reaching them. Sometimes a weekly would be best, sometimes a special journal; every section of the profession has one or more of these, and an author should know their standing, general policy, and requirements. Every journal has a personality of its own—its rules regarding length of articles, headings, typography, tables, illustrations, and references. Information on these points is sometimes given in editorial notices in each number, or in special pamphlets, but a prospective contributor can find out all he wants to know by looking at some recent issues. The manuscript should conform exactly with the custom of the journal it is sent to.

When photographs form an essential part of a case-report, the author should choose a journal that can provide good reproductions. Some journals print photographs on ordinary text paper; unless this is of the thick and glossy type used for plates, photographs may not reproduce well—radiographs present special difficulty. If the selected journal uses plates, the prints submitted should fill the space available; two, four, or six to a plate would be a suitable number, according to the size of picture wanted.

It will help both author and reader if the paper appears in a leading journal; such a journal gives the author the best chance of making his paper known, and gives anyone who wants to read it the least trouble. A paper in a minor journal may easily be overlooked or be difficult to get.

Rejected Papers

An author may overestimate the interest of his paper, which may be acceptable when shortened, or he may err in the choice of journal; the editor may then be able to suggest a more suitable journal. When a paper is rejected, the author should examine it most carefully to see whether it contains some serious defect, because such defects are sometimes overlooked by the author and his local advisers; this inquest should be held even if the editor names other journals that might take the paper. No manuscript is ever rejected without good cause, and a rejected paper, if published, would seldom enhance the author's reputation.* The immediate reaction to a rejection is naturally a feeling of surprise,

* Dr. Whitehead is, we fear, thinking of more spacious days. Latterly we have had to reject many excellent papers merely because other contributions (sometimes perhaps of less intrinsic merit) have had a stronger claim on our columns at that particular moment.—Ed. L.

disappointment, or concern, but this will soon pass off when it is remembered that a critical editor is the best guardian of an author's good name.

Summary

Case-reporting is essential to the progress of medicine. It helps the practitioner and suggests lines of experimental or statistical research; it is also of educational value to the reporter, and a good introduction to medical writing.

All cases of unusual interest should be reported. The grounds for publishing are discussed, and detailed suggestions are made regarding the form and style of case-reports and the choice of journal.

A case-report may be vitiated by an incomplete history, or disfigured by unjustifiable conclusions. On the other hand, speculative conclusions consistent with the evidence enhance its value, and excessive caution is a worse fault than excessive boldness.

It is best for clinician and pathologist to write a joint paper. Before publication, it is helpful to discuss a case at a staff meeting or before a society, and to have the manuscript criticised by a local colleague.

I am indebted to Prof. S. L. Baker for reading the manuscript.

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DEVELOPMENT OF AN ANÆSTHETIC SERVICE OVERSEAS

ORGANISATION AND TEACHING

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THE post-war years have seen remarkable changes in the practice of anæsthesia. In Britain and the U.S.A., where standards have always been higher than elsewhere, the introduction of curare prompted the anæsthetist to take increasing control over the patient's physiological mechanisms, and subsequent developments have completely revolutionised the technique of anæsthesia and have raised its status as a specialty. At the same time in parts of the world where in the past anæsthesia has received little attention, a revolution in a different sense, but of at least equal importance, is taking place.

Outside Britain and America, and centres under their direct influence, the anæsthetising of the patient has by tradition been the responsibility of the operating surgeon. Local anæsthesia, often highly specialised in technique, was always the mainstay throughout Continental Europe, and general anæsthesia, in its simplest form administered by medically unqualified assistants, was a device to be employed only under the compulsion of necessity. The breaking-up of this pattern, which began in earnest soon after the liberation of Europe in 1945, is an event of the greatest significance. Its cause is complex, but it was probably the need to develop major thoracic surgery that provided the necessary impetus. The appearance in Continental clinics of anæsthetists with sufficient training to deal with a major thoracotomy led inevitably to the displacement of local methods from more and more operations. Only in Russia has general anæsthesia been excluded to the extent of performing pneumonectomy under local anæsthesia alone (Petrovsky 1952, Ouglov 1952). While in some countries—Spain, for example—little headway has been made, there is no doubt that within the next decade general anæsthesia as we know it in Britain will become universal.

This revolution imposes a responsibility upon British anæsthetists. If other countries wish to introduce modern general anæsthesia someone must train their anæsthetists and, as far as the Old World is concerned, only Britain can supply the experience and facilities. For Western Europe this presents few difficulties beyond those inherent in designing courses of instruction suited to the foreign student, whose knowledge of the fundamental principles of anæsthesia is often rudimentary. While there is likely to be no general enthusiasm for taking up anæsthesia as a specialty on the Continent, there will, on the other hand, be an adequate number of suitable doctors, with sufficient vision to appreciate the future possibilities, to enable the first steps to be taken.

But further afield, where the practice of surgery, though advancing rapidly, has not yet attained the standards of the West, the introduction of modern anæsthesia is much more difficult. The need for higher standards is the more urgent because in such countries progress in anæsthesia has failed to keep pace with developments in surgical technique. A stage is then reached where good surgery is giving poor results because of bad anæsthesia, and further progress is impossible. As Stammers (1953) has pointed out, in countries where surgery is still at a relatively early stage the three essential factors for progress are good nursing, good anæsthesia, and some sort of blood-transfusion service. As far as anæsthesia is concerned, under these conditions a major obstacle to any sort of advance is the ignorance of its scope and importance on the part of the group of younger doctors from which anæsthetists would have to be recruited. These men, the majority of whom will never have been outside their own country, can hardly be expected to give up promising careers in specialties as yet uncrowded, in favour of one of which they have only hearsay knowledge. When it is also remembered that general anæsthesia has to them been the work of the theatre orderlies, it is not surprising that there is little hope of persuading them to come to Europe to learn anæsthesia.

Thus, when the more senior surgeons have appreciated their need for better anæsthesia, there is no alternative but to invite a specialist to come from Europe on a short-term contract to establish the latest methods and to teach their use on the spot.

Adaptation

Many British specialist advisers are at present working in medical schools overseas with the specific task of raising the local standards of practice and teaching in their own fields. The success of their missions is of considerable importance, not only because, as ambassadors of British medicine, they represent the quality of its practice and the essence of its ethical traditions, but also because they can promote the confidence of the community for which they are working in the integrity of the British people as a whole. This aspect of the adviser's work is often imposed upon him, not necessarily deliberately, by the foreign policy of his own government, especially in areas where there is little reason for confidence in Britain. In any case, whether he likes it or not, he cannot escape being a representative of his own country and, since judgments passed upon him will be inevitably reflected on his race as a whole, he must consider very carefully his relationship with his employers.

For this reason the discussion that follows of the problems associated with this kind of work, based on my experience as adviser in anæsthetics to the Syrian University in Damascus, must begin with a consideration of the relation between the adviser and the people he has come to assist. For however brilliant he may be professionally

and whatever his specialty, he will fail in his purpose unless he can achieve a personal adaptation to his new environment. Mutual confidence and respect are essential; but neither can be attained without an active change of view, of necessity by the visitor, because of the fundamental difference between European and Oriental philosophies. Here lies the real difficulty. The European (and the American) is always conscious of the material superiority of his race and he is arrogant in his belief that the technical advances he offers to less privileged peoples will inevitably be to their benefit and will therefore be gladly received. In this he is often right; but in assuming that the evident value of his contribution will be sufficient to engender an enthusiastic acceptance, and that he can transfer essentially Western methods and ideas unmodified to an Oriental setting, he is all too often proved to be very wrong. The pride of a small nation, especially a new one, is often inordinate, but the foreign adviser, daring to belittle or to ignore it, soon pays for his error in failure to advance his cause.

Furthermore, to countries only recently released from the domination of one or other of the Great Powers, the European brings with him the burden of what may be regarded—often not without justice—as the past iniquities of his own country. He will have to prove that he does not conform to the popular conception of an individual of his race if he is to overcome that curious, intangible resistance to progress, which seems to be met at the outset by most workers in the East. The greatest mistake of all is to expect and to press for quick results, for they are very rarely to be had. The Oriental is not obsessed, as we so often are, by a realisation of the brief span of human lives, and it should be obvious that the visitor from the West, however important his mission may seem, cannot expect to change a philosophy which is as deep-rooted and as appropriate in its native environment as is his own.

The essential fact is that the adviser has no alternative between adoptlng a new attitude towards the time factor in his work or breaking his head against the wall of Oriental procrastination. At the same time caution is needed against a move towards the other extreme. If to push too hard is to encourage resistance, it is also fatally easy in a hot and seemingly lazy country to fall oneself into the habit of taking the line of least resistance. What is needed is a steady continuous pressure on the course of events, and it is one of the compensations for the frustration of working in the East that often after months of irritating struggle against seemingly immovable forces resistance abruptly ceases and success comes all the sweeter for its unexpected appearance.

Patience, tolerance, and the desire to understand an alien point of view are the prime virtues in this field of endeavour; and selection boards for posts of this kind should look for them as strenuously as for professional competence, any amount of which is valueless in their absence.

The Main Problem

The adviser in anæsthesia to a foreign university must introduce modern methods in the university hospital, organise courses of teaching to undergraduates, train as many postgraduates as possible, and leave the anæsthetic services in their charge as soon as they are capable of maintaining them.

The main difficulty is undoubtedly that of stimulating the interest of suitable postgraduates in his specialty. He has to create a situation in which anæsthesia offers an attractive career as a part-time specialty in a country where previously it had been the occupation of the nurse or theatre orderly. Unless he can do this quite soon, he is faced with the alternatives of returning home with nothing accomplished or spending several years in what will become a backwater as far as his own career is concerned. This can present a formidable problem, for the ignorance of the scope of anæsthesia and the part it should play in successful surgery is astonishing in the more remote countries and especially those with Continental traditions in medicine.

The situation in Syria in 1950 was probably typical. Anæsthetic methods had remained virtually unchanged since the introduction of the Ombrédanne inhaler in 1909, and ether with this apparatus was still used almost exclusively for major surgery. Spinal anæsthesia was limited to operations on the lower limbs, rectum, bladder, and inguinal regions, and local anæsthesia was used for minor surgery, operations on the head and neck, and thoracoplasty. The surgical staff of the Syrian University had realised that the anæsthesia available was quite inadequate in relation to the rapid progress they were making in surgical technique, and they had asked the British Government to help them to find an adviser in anæsthesia. Nevertheless they had no clear understanding of the proper rôle of the anæsthetist in their work.

The students, interns, and young postgraduates, few of whom had ever travelled abroad, had absolutely no conception of the importance of good anæsthesia and made no attempt to hide their belief that a specialist in anæsthesia was both unnecessary and rather ludicrous. They said that it would be impossible to find a postgraduate who would be willing to take up a career in anæsthesia, when so many opportunities existed in safe, well-tried specialties. Since a staff of four would be required to provide an anæsthetic service for the whole hospital of 400 beds, and that all of these would have to be drawn from this particular group, the prospect looked gloomy indeed.

I do not believe that this state of affairs is peculiar to Syria and I think it is likely to be met wherever an attempt is made to introduce anæsthetic practice at a professional level where Continental traditions exist.

Under these circumstances, the first objective is to make the surgical staff of the medical school dependent upon good anæsthesia. Here there is no problem; the immense superiority in operating conditions provided, for example, by nitrous oxide and curare, as compared with ether by the Ombrédanne inhaler, for an abdominal operation, is enough to win over the most conservative of surgeons. To build up close team-work between anæsthetist and surgeon requires tact and patience. But, once acquired, the anæsthetist can feel sure that he will receive the whole-hearted support of his surgeons in developing his service. This is of the greatest importance to the adviser working alone in a foreign faculty, for without influential support he will be able to achieve very little.

The interest of the interns is best aroused in the first place by making them take some part in the administration of anæsthetics.

Rather than create a full-time internship in anæsthesia, which would in any case have proved difficult to fill, it was arranged that each surgical intern in rotation should spend six weeks in the department of anæsthesia. It is not, of course, possible to produce anæsthetists in such a short time and no attempt has been made to do so. These men do, however, learn to give safe intravenous anæsthetics and they do begin to understand the scope of modern anæsthesia. Their duties include preoperative and postoperative examination of the patient, record-keeping, and assisting with administrations. Those who show enthusiasm are encouraged as much as possible, and a few continue to work in the department in their spare time after their period of service is over. From among these, it is hoped that the future Syrian anæsthetists will come.

Although in his attack on the younger generation and in making modern methods a normal routine, as the Ombrédanne had been in the past, the adviser is ensuring a future supply of anæsthetists, he can still make little real progress unless he can quickly find postgraduates to train as his assistants. The personality of the first of these is a matter of great importance for the future of the

department of anæsthesia will be in his hands. Unfortunately the choice of candidate for this assistantship will be very limited. He must come from a small group of graduates who have completed their military training and have not yet settled down to some other specialty. These will all be as ignorant of anæsthesia as anyone else in the country. There is little to offer in the way of inducement except the prestige of an appointment to the medical faculty and the prospect of taking the lead in a new field, neither of which seemed at first to make much appeal in Syria.

Financially the outlook is far from promising, for there is little likelihood of much private practice for the first two or three years, and the stipends paid by Middle East universities are ridiculously small. The adviser must make every effort to arrange for payment for anæsthetics given to private patients, although he is wise not to undertake private practice himself. Difficulties arose in Syria because the question of anæsthetic fees had never before been considered, and in the tariff of fees payable in government hospitals for services to private patients no provision was made for the anæsthetist. Only after a stubborn fight over a period of two years was it agreed that he should be paid a fee roughly a quarter of that received by the surgeon for the operation.

Altogether the appointment of this first assistant is a critical affair for the adviser; with a limited understanding of the people among whom he is working, he has little choice but to take whatever Fate offers him, in the full knowledge that if he is unlucky his mission will probably fail, or at least be prolonged beyond reason. But if his luck holds—and it must be admitted that with so little, materially speaking, to offer, the chances are that only a man with vision and enthusiasm is likely to accept an anæsthetic post—then the whole outlook changes immediately. Given one loyal, intelligent assistant, the coöperation of the surgeons and a growing interest on the part of the students and interns, the worst of the difficulties are over and the adviser can afford to wait for a few months before further appointments are made to his staff. By then it is likely that anæsthesia will not seem so unattractive a specialty and the succeeding assistants will not be so difficult to find. At the Syrian University I had to wait a year to get my first assistant, but in the following year the second and third were available as soon as the posts were created.

Teaching

Where the adviser in anæsthesia is appointed to the faculty of a university, he must undertake both undergraduate and postgraduate teaching.

Anæsthesia today is not a subject in which it is possible to give much practical training to the undergraduate. On the other hand, it is important that the student should have a sound knowledge of the theory of anæsthesia before serving his internships, during which practical training will begin. Two major difficulties existed in Syria.

When, in 1951, I proposed to introduce into the curriculum a complete course of lectures on anæsthesia, I was strongly advised against making the attempt. At that time the Syrian student was under heavy political pressure and any move to make him work harder invariably resulted in a strike. When opposition to his proposals has a political flavour the foreign adviser must proceed with the utmost caution, and, consoling himself with the thought that in most countries policies often change, he should bide his time. In 1952 the present régime came into power and made it painfully clear to the youth of Syria that henceforth its interest was to be in study and not in politics; revealed for the first time in their true colours, the excellent medical students, their energies directed into proper channels, accepted a course in anæsthesia without complaint, if not with evident enthusiasm.

The second difficulty was lingual. The Syrian faculty of medicine is unique in that teaching is exclusively in Arabic, although two-thirds of the students speak good French and one-third English in addition to their native tongue. In these circumstances, the only solution was to lecture in English and to provide each student with a copy of the text in both English and Arabic; to enable him to get experience in lecturing, the first assistant summarised the lectures in pairs in Arabic. In addition, films on various anæsthetic topics were shown and anæsthetic techniques demonstrated in the theatres to small groups of students in rotation. Examinations, both oral and written, are held twice a year, according to university custom.

As regards postgraduate training, the anæsthetic adviser abroad is primarily concerned with producing safe, reasonably competent anæsthetists as quickly as possible. The essential quality in a trainee, in a country taking up modern anæsthesia for the first time, is certainly safety, for it would require only one or two accidents in his early days to ruin his career and to destroy all confidence in the new methods. But at the same time the adviser must work quickly if he is to complete his mission within three years and he cannot afford the more gradual approach for which the situation calls. Furthermore, teaching has to be fitted into a busy programme of routine administrations, with the day's work finishing at 2 P.M. for the greater part of the year. Under such conditions training must be "trolley-side" from the outset. In essence this means that theory and practice are taught simultaneously and the theoretical aspects of practical matters discussed as and when they arise. A long morning's work in the theatre provides ample opportunity for teaching theory, if the surgeon's tolerance to the mutter of voices at the head of the table is reasonably high.

The postgraduate student's first experience is with the intravenous anæsthetics used in induction. This is followed by learning the theory and use of nitrous oxide and ether in the closed circuit, from which he graduates to cyclopropane anæsthesia, and to the ethyl chloride and open ether technique for children. With each new method he is given increasing responsibility, and from the beginning he is responsible for the preoperative and postoperative care of patients and for charting all observations. Because of the scarcity of nitrous oxide, he is not taught the use of semi-closed circuits until he has become competent with the closed methods, when he learns the use of nitrous oxide and pethidine anæsthesia and the more advanced techniques. The student assists from the start of his training with the care of the curarised patient; he learns under close supervision how to control respiration and makes his first acquaintance with laryngoscopy on these really well-relaxed subjects. No student is allowed to use muscle relaxants without supervision until his competence has been fully proved.

Throughout his training every opportunity is taken for informal talks on anæsthetic topics and discussions on case-records; standard textbooks and current journals are made available, so as to extend his theoretical knowledge as widely as possible. Once the student has reached a stage when he can work entirely without supervision, he is encouraged to put his own ideas into practice and to present his results for criticism.

It is not suggested that this method of teaching is generally applicable; in so far as it succeeds under these special circumstances, it does so because of its highly individual nature. With only one or two students at a time—the adviser who has more is fortunate indeed—the student-teacher relationship becomes very intimate and rapid progress can be made.

Apparatus

The anæsthetist introducing modern techniques in a remote country meets certain difficulties arising from the employment of apparatus developed for use in industrial countries with temperate climates.

The biggest problem is in maintaining supplies of anæsthetic gases. Oxygen can usually be bought locally, but nitrous oxide and cyclopropane must be imported from Britain, France, or the U.S.A. The high cost of transporting cylinders makes gaseous anæsthesia an expensive affair in areas far from the centres of manufacture. Furthermore, because of the difficulty of finding cargo space for gas cylinders and the possible shortage of cylinders available for export, deliveries

must be irregular and unreliable. Local agents are unwilling to sink capital in stocks of gases, and it is not easy, with the limited funds likely to be available to a new anæsthetic department, to build up stocks in the hospital itself. The only solution is for the manufacturers to finance stocks of essential gases at agencies in centres that can serve small groups of neighbouring countries. The financial risks would be slight to such large concerns and the convenience of having constant supplies available within one or two weeks would do much to encourage the development of anæsthesia overseas.

It is a mistake to use small cylinders of nitrous oxide abroad, for there are seldom facilities for refilling them. When this is unavoidable, the only possibility is to acquire a simple apparatus by means of which the gas can be decanted from large cylinders. We have used this method with good results in the workshop of the Syrian University Hospital. Ideally, hospitals in remote countries should have pipe-lines installed, but where this is impossible apparatus should be adapted to carry the largest size of cylinders, for the cost of transporting the same volume of gas in one large cylinder is less than in several small ones, and there is no need for decanting.

A constant anxiety in hot, very dry climates is the explosion risk from static electricity. In Syria, where the relative humidity is very low, static charges accumulate with remarkable ease; it is, for example, a common experience to receive a quite painful spark when getting out of a car. Although no accidents have so far been reported, the danger must be considerably greater than in Britain and it is clearly necessary to take every precaution. The most important measures seem to be: humidification of the air of the operating-theatres; careful earthing of all trolleys; and the use of conductive rubber for all apparatus. British manufacturers do not always supply such rubber, though it seems to be universal in American equipment; and it should be an essential feature of all apparatus exported to hot countries.

Rubber is a trouble to the anæsthetist in a hot dry climate for it perishes with alarming rapidity—particularly the inflatable cuffs of facepieces and the thin rubber used for the cuffs of endotracheal tubes. We have decided that the best type of face-piece is that with a detachable cuff, which can be quickly and economically replaced by air-mail supplies. It is useless to maintain reserves, for these perish very nearly as quickly as those in general use.

Anæsthetic machines with metal piping rather than rubber tubing are much to be preferred in hot climates, and I believe that the needle type of fine-control valve, such as that found on certain Heidbrink machines, is a safer device than the standard reducing valve in these conditions. It seems clear that the makers of anæsthetic equipment must study the requirements of anæsthetists in hot countries if gaseous anæsthesia is to develop overseas. Certainly research is needed for the production of climate-resisting conductive rubber.

The anæsthetist ordering apparatus for use in a remote country should choose the simplest available, for he will himself be responsible for its maintenance and for minor repairs. It is wise to keep an adequate reserve of all non-perishable parts because, even in these days of air-freight, replacement usually takes several weeks.

Blood-transfusion

While the organisation of blood-transfusion services is not normally the responsibility of the anæsthetist, he is certainly concerned with the clinical applications of transfusion, and, where supplies of blood are inadequate for his purpose, he may be forgiven for trespassing outside his own territory.

The efficiency of the blood-transfusion services in any country is a reflection of its social development. Only where enough people are willing to donate blood with no other motive than to benefit the whole community, can the highest standards be attained. Where social conscience is as yet immature, the surgeon must depend upon the relatives of the patient needing transfusion, or he must buy blood from what may be termed "public vendors." Neither case meets the requirements of modern surgery, but in many parts of the world no other alternatives exist.

A partial solution has been found in the Syrian University Hospital. In 1952 the newly formed department of anæsthesia volunteered to set up a simple blood bank, the need for which was very evident, for with the existing system of looking for donors among the patient's relatives, blood was never available when it was most urgently needed. It was therefore proposed that the hospital authorities should make a levy of a pint of blood from the relatives of all patients admitted for a major operation, whether or not the individual case was likely to need transfusion.

Discretion would clearly have to be exercised and there would be no need to enforce the levy when difficulties arose—as long as the right to exact payment in terms of blood existed, the source of supply would be secure. It is easy to imagine what the reactions of, for example, the British public would be to such a measure; but in an Arab country, where family ties are strong and an operation a matter of concern to all the patient's relatives, who assemble in large numbers to see him safely installed, difficulties have in fact rarely arisen. Most of the donors, when the position has been explained to them, seem well pleased to find themselves doing a public service, and since the scheme came into operation the number of genuine voluntary donors in Damascus has begun to rise. Records are kept of all donors in the hope that one day they will form the nucleus of a Syrian National Transfusion Service.

At first this blood bank aimed at providing no more than adequate and unfailing supplies of ABO-grouped blood. In this it has succeeded and the effect on the surgical practice of the hospital has been considerable; further developments are now taking place, and Rh grouping will come into use before the end of 1953.

The blood bank is controlled by the department of anæsthesia, which, it was hoped, would be extended to deal with all aspects of resuscitation. But an overenthusiastic plan to equip all wards of the hospital with modern oxygen apparatus led to a demand for funds considered excessive for a new department, and it is now unlikely that the apparatus will be acquired before 1954—two years after the request was first made. If equipment for one or two surgical wards only had been asked for in the first place, no difficulties would have arisen and the other departments would soon have hurried to make good their own deficiencies in oxygen therapy.

Limitations

It is very important that the medical adviser to an overseas university should realise the limits to what he can expect to achieve. On his arrival he is immediately conscious of standards different from those to which he has been trained. He finds methods of treatment, surgical techniques, and attitudes of mind towards disease which conflict, sometimes to a disturbing degree, with what he has been accustomed to believe to be right and proper. He finds lower standards of nursing, with little sense of responsibility or vocation, and wards filled with patients with whom he has no direct means of communication. Into this alien background he has to introduce his own special knowledge, previously only applied in familiar surroundings where he could predict with reasonable accuracy the behaviour of his associates. Whatever he has come to teach must be adapted to fit harmoniously into this new environment; any attempt to reproduce in detail the organisation of his work as it was at home will certainly be frustrated. For although he can, and must, insist on the modification of practices directly concerned with his own efforts, he will be able to do nothing to change the over-all pattern. Medical practice in any country has a highly individual quality which is a product of the same factors—historical, climatic, and so forth—determining the national character of its people. Techniques in any branch of medicine transferred from one country to another, unless their application is extremely narrow, seem quickly to acquire modifications with the national flavour of their new home. The foreign adviser must not, therefore, adopt a rigid attitude and he must be prepared to participate in the adaptation of his special knowledge—which will in any case continue to take place after his departure. His aim should be to ensure that an adequate number of

sufficiently competent individuals thoroughly understand the *principles* of his special subject and, as soon as that is achieved, to leave them to their own devices.

As far as anæsthesia is concerned, the basic requirements are that as many as possible of the influential surgeons should become so dependent upon good anæsthetic services that they will see to it that there is no return to the old methods, and that personnel and facilities in the country are adequate for training more anæsthetists. From that point onwards the adviser in anæsthesia has no further part to play.

In Syria it has been possible in three years to make modern anæsthesia an indispensable part of surgical practice in the only medical school in the country, and future Syrian graduates will regard it as much the normal thing as their predecessors did the Ombrédanne. But for Syria as a whole there is a danger that enthusiasm for the benefits of modern anæsthesia, already becoming evident in the appearance of apparatus in private and provincial hospitals, will outrun the supply of qualified anæsthetists, and standards outside the capital are likely to remain low until the present generation of interns have completed their military service. The foundations for a good anæsthetic service now exist, and it is up to the Syrian medical profession to build upon them. One thing only is certain—that despite its British origins, whatever the ultimate form of anæsthetic practice, it will be as essentially Syrian in nature as any other branch of Syrian medicine, and this is as right as it is inevitable, whatever may be the feelings of the adviser on the matter.

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RECORDING PROGRESS IN THE DISSECTING-ROOM

A VISUAL DISPLAY METHOD

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IN Britain the progress of individual students in their practical anatomy class is usually punctuated by a number of viva-voce examinations, and the situation readily lends itself to display on a "progress chart" such as is commonly used in industry. We have introduced a chart of this kind into the dissecting-room at Oxford, and have been gratified by the results. It was therefore thought worth while to write a short account of the system employed so as to bring it to more general attention.

THE SYSTEM

Booking of Vivas

Every Friday, an appointments list for each day of the following week is posted in the dissecting-room. On this list a proportion of the working time of each demonstrator on duty is divided into half-hour periods, and the students can sign their names, in groups of two or four, in any vacant space, thereby booking a particular demonstrator at a particular time on a given day. They must indicate the viva which they wish to take, so that one group of two can join another taking the same viva if they so desire. All appointments must be made by a specified time of day—i.e., 10.15 A.M. for vivas to be taken in the morning of that day and 2.15 P.M. for vivas to be taken in the afternoon. After the viva has been taken, the result is indicated by the demonstrator on the appointments chart by initialling each name and adding the letters P for pass, R for referred, or F for fail. (Any student who has just begun the study of anatomy may, in his first two vivas, be referred for another attempt instead of being failed.)

Viva Cards

Each student retains a card with spaces for the results of each viva, and this card is signed by the demonstrator with the date and a percentage mark. If this mark is below 50%, the student is required to retake the same viva, with the stipulation that it cannot be taken again on the same day. The last viva on each part is a revision of the whole part, and if the student fails to pass the revision viva at the second attempt, he is required to re-dissect the part the next term and to pass every individual viva on it again. The completed card is handed in at the end of each term, and the marks on it, including those of the failures, are averaged. This mean figure is available, in case of need, to give an idea of the accumulated progress of each student.

Time Limits

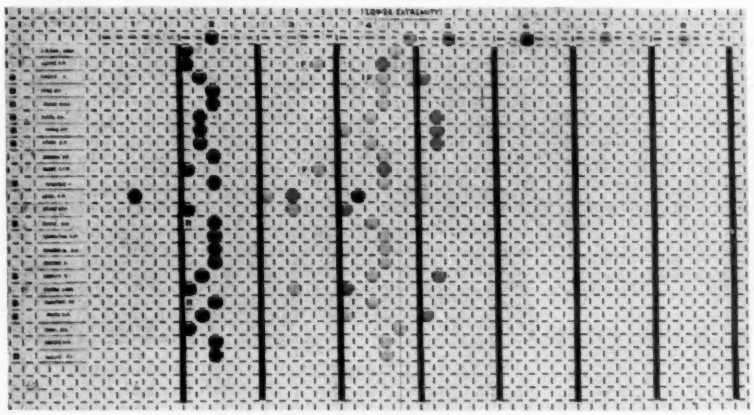
It has been found desirable to make a proviso that each viva should be attempted by a given time, for otherwise students fail to organise their time properly, and there is a considerable rush at the end of term to complete the dissection and take the revision viva. The "deadline" for each viva was previously determined by an analysis of the dates on the cards handed in by the students on two successive terms. The date by which 90% of the students had passed the viva under consideration was selected as the date by which every student ought to have attempted it, and a list drawn up on this basis is posted in the dissecting-room. If a student does not present himself by the appropriate date, steps are taken to find out the cause, and if he is repeatedly behind time without any satisfactory excuse, he is required to dissect the part again.

Another innovation, at least at Oxford, is the allocation of the parts to be dissected in the following term at the end of the preceding term. This allows the student to do some preliminary study in the vacation and enables the first viva of each part, which includes the bones of that part, to be taken earlier than previously.

Progress Chart

An essential part of the working of this system is the progress chart on which the results and time of each viva are immediately visible to both students and demonstrators. The equipment used at Oxford is that manufactured by Messrs. Remington Rand under the trademark 'Graphdex.' It consists of light metal boards, slotted horizontally and vertically in a grid 1 cm. square; each board measures 30 by 15 in., and several boards can be built together to form larger units as desired, brackets being provided for fixing the whole to the wall. Into the slots in the boards can be fitted square transparent celluloid tags of different colours, or bearing different letters or figures, and tagged plastic cases containing the names of students typed on strips of perforated paper. Small rolls of adhesive plastic material having the days of the week printed on it can be affixed to the surface of the board, and adhesive tape of different colours can be supplied.

The parts of the body are treated separately, and the names of those taking each part are arranged alphabetically at the left-hand side of the boards, as shown in the accompanying figure, beginners being indicated by a B beside their names. The weeks of the term are



Progress chart for lower extremity at about mid-term.

The weeks of term are numbered off along the top of the chart and divided from each other down the chart by strips of red adhesive tape. The students' names are arranged alphabetically down the left-hand side of the chart, the students in their first term of dissection being indicated by a letter B beside their names. Individual progress in passing viva-voce tests is recorded by square transparent celluloid tags of different colours, one colour for each viva. Failures are recorded by the letter F and reference for another attempt by the letter R. The days by which each viva must be taken are shown by tags of the appropriate colour placed in front of the appropriate day. When the necessary series of vivas has been successfully completed, the letter C is placed beside the student's name at the right-hand end of the chart, indicating completion.

laid out as shown in the figure, and the time by which a given viva should be attempted is shown by a coloured tag placed in front of the appropriate day. As each student passes this viva, a tag of the same colour is placed opposite his name, indicating the day on which he passed. If he should fail, or be referred for a second attempt, the letters F or R are inserted in place of the coloured tag. In this way, each student acquires a series of coloured tags indicating the days on which he attempted and passed each individual viva. When he has passed all his vivas, the letter C is inserted at the end of his row, indicating that the part has been completed.

Other signals not essential to the working of the system are sometimes employed; for example, a black tag can be used to mark an occasion on which the student concerned booked a viva but did not appear to take it, thereby preventing someone else from taking a viva at that particular time.

The progress chart is adjusted daily, and the task of keeping it up to date is allotted to one demonstrator, who has charge of the tags and signals. At the end of term the names in their transparent plastic holders are removed and kept until the parts are allotted for the next term. It is not necessary to type fresh lists each term, but only to add newcomers, because each individual student's name in its holder lasts him for the whole of his anatomical career.

DISCUSSION

The widespread use in this country of a system based on the signing of cards retained by the student argues that it works well in practice, but, where there are large numbers of students, only a few demonstrators, and limited dissecting-time, the use of cards alone has drawbacks. It is impossible to form a clear picture of the progress of a given student when his card is only seen at irregular intervals throughout the term, and it is difficult to keep track of those students who are absent or those who are simply not working. Again, the individual student has little idea of his progress in comparison with other students or in relation to the time necessary for his remaining vivas. It was for these reasons that the system outlined above was adopted.

The system has now been in operation for four terms, and it has proved easy to work. The only effort involved, additional to a simple card system, is in the provision of stencilled viva appointments lists and in the short time (about five minutes a day) spent in keeping the progress chart up to date.

The appointments lists obviate the formation of queues of idle students waiting to take vivas on a basis of "first come first served," and experience has shown that the primary task of demonstrating is not swamped on any one day by demands for vivas. In fact, one of the main advantages is that there is more time for demonstrating than before, because it can be better planned and is not subject to interruptions. The half-hour period for taking a viva is adequate for most purposes, and when only two people are booked it is not always necessary to utilise the whole time. It is also possible, by inspection of the booking lists, to bring in more of the demonstrating staff on rush days and to reduce their number on slack days.

The spacing of vivas by setting a time limit for each is of great value in the last weeks of term, when there are no longer innumerable vivas to be taken in a scramble in which neither student nor demonstrator does himself justice. Instead, the revision vivas on each part can be given their full emphasis and importance, and it becomes possible to have them all taken by senior demonstrators only, thus ensuring a more uniform standard. Throughout the term, the student is in no doubt as to how much time to allow himself for each individual dissection, and he can plan his work accordingly.

The progress chart indicates at a glance, both to demonstrators and to students, how each student is faring. Lazy and inefficient workers can be detected early in the term and the appropriate measures taken immediately, instead of at the end of the term when the cards are handed in. There is a double check on the result of each examination, since the student retains the viva card with the date and the result, and this result is also recorded on the appointments list (which is filed) and on the progress chart. This is a useful safeguard against the inevitable student who loses his card just before the revision viva.

The chart has aroused a great deal of interest among the students, who are always consulting it, and it appears to act as a definite incentive. They realise that they themselves are keeping watch on their own progress, for which they themselves are responsible. The chart would probably be of special value in departments where a large number of students confront a small number of demonstrators, and where the latter are therefore unable to learn each student's face and name before he passes out of the department.

The system of recording the necessary information is only one of many possible systems, and the equipment is so flexible that it could be adapted to many other requirements. For example, a similar arrangement could be used to record the progress of students in experimental

physiology classes where a set number of experiments has to be completed. In this department, similar equipment is already in use for tracing the processing of microphotographs and histological preparations.

SUMMARY

A system of supervising and controlling viva-voce examinations in the dissecting-room by means of an appointments list and a progress chart is described. It is suggested that a system of this kind might prove to have applications to the teaching of other medical subjects.

We should like to acknowledge the advice and encouragement of Prof. W. E. Le Gros Clark and Dr. G. Weddell.

THE "HOW-TO-DO-IT" TEACHING FILM
AN EXPERIMENT IN ITS USE

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THE use of "how-to-do-it" films for teaching simple techniques has several advantages, particularly when classes are large. Many laboratory procedures involve small and detailed pieces of apparatus which cannot easily be shown to more than a few students at a time; the film can magnify these details and present them in such a way that they are easily visible to an audience of any size. The motion picture has also the advantage that only the best possible demonstration is shown. Demonstrators vary in their ability, both in performing the technique itself and in their skill in "putting it over." Lastly, the teaching film can make use of animated diagrams, models, and other material which would not otherwise be available to the demonstrator. The main disadvantage of such films is that, once made, they are inflexible. The pace at which the film moves cannot be altered to suit the particular class being taught. Where detailed techniques are being explained, failure to appreciate what is being done at one stage may easily lead to the rest of the film being misunderstood. For this reason it is likely that detailed instructional films (which imply dispensing with the use of demonstrators) are most likely to be successful when they are limited to relatively short and simple procedures.

The purpose of this experiment was to study the effect of teaching a technique by film, compared with "live" teaching by a group of demonstrators.

Carpenter (1949), at the Pennsylvania State College, has made extensive investigations of the effect of instructional films on high-school students, while Steinberg and Lewis (1951) have investigated the instructional value of a physiological teaching film with regard to changes in factual knowledge. However, no investigations have, as far as we are aware, dealt with "technique" films intended for medical students.

CHOICE OF FILM

The film chosen was *How to inoculate a plate*. This was made at St. Mary's Hospital Medical School and is a silent colour-film, running for eight minutes and designed solely for bacteriological students. The procedure is one which normally takes about thirty seconds to perform, and the film illustrates this in detail. The whole technique is shown twice over with variations in the viewpoints and close-ups chosen. The pattern of spreading is shown by diagrams which are also used as a summary at the end of the film.

This film was selected partly because it is one of the few designed solely to teach a technique. All extraneous information such as the reasons for doing it have been excluded. This may or may not affect the teaching value, but it has enabled the material to be kept on the simplest possible level. The main points which are stressed in the film are: the handling and sterilisation of a wire loop; the method of inoculating the plate followed by resterilisation of the loop; the pattern of spreading; and the principle of dilution of the culture.

The second reason for selecting this film was that the performance of the students can be readily judged by using the inoculated plate to mark from.

PROCEDURE

Students at the beginning of their course of instruction in bacteriology at Guy's Hospital Medical School and St. Mary's Hospital Medical School were used as subjects. The demonstrations were carried out by the members of the teaching staff who normally taught these classes.

All the students who had previous bacteriological experience were excluded from the test. The remainder were divided alphabetically into two groups of approximately equal numbers. The film was shown to one group with no additional explanatory comment. The second half of the class were subdivided into groups of from 6 to 8, each group being shown the procedure by a demonstrator. The time taken was not allowed to exceed eight minutes—the running time of the film.

Directly after the demonstration and the film both groups were given samples of an eighteen-hour broth culture of staphylococci which they cultured on to a blood-agar plate. The backs of the plates were given random numbers for identification purposes and then incubated.

METHOD OF MARKING

As we have said, the culture plates provide a tangible result to mark. In order to ensure that all these results could be checked at a later date, the plates were photographed after incubation and the marking done from the photographs rather than from the actual plates.

The use of 35 mm. reversal film for photography gives a positive miniature lantern slide in one stage and is quick and cheap to carry out. The results were projected in a random order and marked by two examiners working in conjunction, which was found to give more uniform results than by having either examiner working on his own.

The marking system is shown in table I. Each of the main points to be learnt from the film were marked in what was considered to be their order of importance. If at any stage a plate scored "0" then marking ceased at that point.

An exception was made in the case of group 1, where a mark of "1" was substituted for "0." This was done so that the total number of marking groups were kept to 10 instead of 11. In practice this made no virtual difference to the results as only 1 student had this score. This method of marking precluded the student who had failed to attempt the correct

TABLE I—SYSTEM OF MARKING

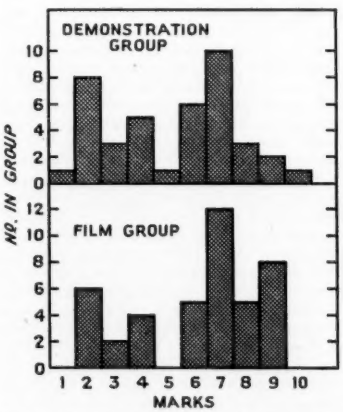
—	Marks		
(1) *Growth* ..	1 or 2 (in this case a mark of "1" stops further score)		
(2) *Pattern* ..	0 None	1 Botched	2 Perfect
(3) *Dilution* ..	0 None	1 Some	2 Progressive
(4) *Area* ..	0 Less than 50%	1 50–70%	2 Over 70%
(5) *Tidiness* ..	0 Ploughing	1 No ploughing	2 Extremely neat

A mark of "0" stops all further score.

pattern from scoring unearned high marks by accidentally achieving a usable dilution and by fully covering the plate. The marking system was checked by re-marking a proportion of the plates unknown to the examiners, and was shown to be remarkably consistent.

RESULTS

The accompanying figure and table II show the results. The shape of the histogram has been rather distorted in both groups and this was found to be due to the marking system used.



Results of comparison between demonstration and teaching film.

Firstly, the high proportion of "2s" is caused by many of the plates scoring 2 for evidence of growth and no further marks as there was no discernible pattern. Secondly, there is a very low proportion of "5s." On studying the marks it was found that nearly all the "4s" scored (1) 2, (2) 1, (3) 1, (4) 0, and having no marks for "area," scoring ceased. On the other hand the "6s" were nearly all of the same pattern but scored in addition, 1 for "area" and 1 for "absence of ploughing." This resulted in students either scoring "4" or "6," the only one who scored "5" having a (1) 2, (2) 1, (3) 1, (4) 1, (5) 0 pattern. However, as this factor was common to both groups, the effect on the results was negligible.

These results show no statistically significant difference between the means of the two groups. A comparison was also made of the results obtained at Guy's Hospital Medical School as against those at St. Mary's Hospital, and though the numbers were far too small to be significant the histograms followed the same general pattern.

TABLE II—COMPARISON OF RESULTS

Hospital	Demonstration		Film		Difference between mean
	Number	Mean	Number	Mean	
Guy's ..	19	5·47	23	6·55	1·08
St. Mary's	21	4·99	19	5·80	0·81
Total ..	40	5·23	42	6·18	0·95

Standard error of difference between totals = 0·53.

COMMENT

Although the results show that there is little to choose between a film and "live" teaching it would be unwarranted to generalise from this conclusion. Quite apart from the rather small number of students tested, there is both the quality of the demonstrators and the quality of the film to be considered. In the first place demonstrators will always vary in their efficiency and this is a point in favour of a standardised film. It would be desirable if other medical schools would coöperate in carrying out a more extended investigation which would result in a wider sample of demonstrators being tested against film.

Then there is the film itself. This is but one film and it deals with only one of the many possible subjects, but unfortunately few motion pictures of brief technical procedures are so far available. Many longer films which are more ambitious, and consequently more diffuse in outlook, have been produced, but none of these is likely to serve the same limited purpose. We feel that there is a place for the short technical film of this nature. It is relatively easy to produce, the cost is low, and the potential audience is large enough to warrant the time and effort involved.

SUMMARY

An experiment comparing the brief "technique" film against "live" teaching showed no significant difference between the two groups. This is taken to indicate that either the film or "live" teaching can be used with equal effect; therefore, choice between these methods of teaching can be determined only by the size of the class and factors of convenience. There is a need for further tests and more films of this kind.

We should like to acknowledge the help of Prof. Robert Knox in facilitating the experiment at Guy's Hospital.

REFERENCES

Carpenter, C. R. (1949) Progress reports of an Instructional Film Research Program for the United States Army and Navy.
Steinberg, H., Lewis, H. E. (1951) *Brit. med. J.* ii, 465.

Reviews of Books

Modern Trends in Urology

Editor: E. W. RICHES, M.C., M.S., F.R.C.S., surgeon and urologist, Middlesex Hospital, London. London: Butterworth. 1953. Pp. 476. 75*s*.

THIS is a collection of thirty-eight articles by thirty-six writers, and though it is not a complete textbook most of the main regions of urology are represented. There are nine articles on the prostate, eight on the kidney (if Wells's article on uræmia is included here), three on the ureter, and three on the bladder. The remaining fifteen articles deal with non-regional aspects such as pathology, radiology, anæsthesia, and tuberculosis. The emphasis of most of the writers is practical rather than theoretical and they give mainly their personal views and methods, devoting less space to discussion of recent published work. This makes up in brevity and clarity for what it loses in comprehensiveness, and few would deny that the balance is well on the credit side. Mr. Riches is to be congratulated on his choice of contributors and it is interesting to find among them two Australians, an American, and a Swede. Less than two-thirds of the contributors are exclusively urologists; and the implication of this—that in Britain urology is not yet generally and officially recognised as a separate specialty—is discussed, from slightly different standpoints, by Riches and Morson in the first two chapters. The standard of all the articles is high, but we may select for special mention those of Wells on uræmia, Graham on the operative approach to the kidney, and Pyrah on the ætiology and prevention of urinary calculi. As a record of an individual achievement which has itself directed a modern trend, Stewart's article on partial nephrectomy is noteworthy.

"Undoubtedly the most important problem confronting the urologist today is that of effectively controlling cancer of the bladder." Few would disagree with this sweeping statement, the opening sentence of Sandrey's very sound chapter on this subject. His assessment of total cystectomy leaves it a much smaller place than it was occupying five years ago. There are no less than six articles on various methods of prostatectomy. The cold punch operation is described by Gershom Thompson, of the Mayo Clinic, and diathermy loop resection by Henry Mortensen of Melbourne. Many will note with surprise and perhaps also with applause the brief and unfavourable reference to hypotensive techniques in Johnson's article on anæsthesia. The omission of any discussion of the means of preventing or correcting a fall of blood-pressure during operation is less satisfactory. No modern article on urological X-ray diagnosis would be complete without a description of aortography, but it seems a pity that Whiteside's article should deal only with this method and presacral air insufflation. In practical importance these methods do not, and never will, compare with excretion pyelography, the technique of which is still being improved.

Mr. Riches has earned the gratitude of all urologists and general surgeons by producing this important up-to-date record of achievement and opinion.

Approach to Clinical Surgery

GERALD H. C. OVENS, O.B.E., M.B. Lond., F.R.C.S., professor of surgery, University College of the West Indies. London: J. & A. Churchill. 1953. Pp. 309. 22*s*. 6*d*.

THE surgical introductory course for students beginning their clinical work is always a great problem for those who have to conduct it. From his chemistry, physics, anatomy, and physiology—all of which have some pretence to be considered as exact sciences—the student is plunged into a completely new world of vagueness and uncertainties, and at first lives in a state of bewilderment. In this book we read how one surgeon with a great reputation as a teacher deals with the matter. He begins with a very readable account of some of the principles underlying surgical practice, and we could have wished he had made it longer. Still, there are numerous remarks about fundamentals put in a simple, attractive, and memorable way. It is sound, for instance, to point out that white connective-tissue fibres do not appear until the fifth day after a wound has been given, and only reach 50% of their maximum in three weeks—a fact of nature which should lead the surgeon to limit strictly the activities of patients allowed up on the day after operation. Yet the student longs for practical things; he finds it confusing to hear about diathermy, the cautery, the sigmoidoscope without seeing them. Many years ago Rutherford Morison wrote a similar book, very illuminating to the novitiate, in which he took examples of common surgical diseases and traced the story of the patient through the whole course of his treatment, and no doubt Professor Ovens does this in his actual classes, but in this book the subject is rolled into a bolus which may be rather hard to digest. Only 107 pages are in question, however, so the student can read them through again, and find new and valuable truths which he had overlooked. The second part, twice the length of the first, tells the student, in a commendably human way, how to approach the actual patient, how to examine him, and what it is essential to do and put down in the history sheet. It is an attractive book, easy to read and packed with reliable information.

Early History of the Liverpool Medical School from 1834 to 1877

HENRY A. ORMEROD, M.A. Liverpool: University Press. 1953. Pp. 52. 3*s*. 6*d*.

MEDICAL examinations in Liverpool like much else in that city go back to the later years of the slave-trade, when the examinations of the so-called African surgeons were instituted at the Infirmary. It was enacted that no vessel engaged in the African trade should be permitted to clear unless she carried on board a duly qualified surgeon. Examinations were held on the first Tuesday in the month, all candidates paying a fee of 5*s*. with a further fee to the board of 3 guineas if they were successful. With the passage of time, and not without trials and difficulties, the teaching became well organised. In 1867 lectures began at 8 A.M.; the last lecture of the day, on surgery, started at 7 P.M. There was little time for reading. One student at that period had to walk five miles to and from his home. He tells us that top-hats were regularly worn in the dissecting-room, if only as a security measure against the danger awaiting them if they were left hanging in the passage. The author has included much interesting material and provided a very readable booklet. It is so well documented that the footnotes occupy half the space and on several occasions almost chase the text off the page.

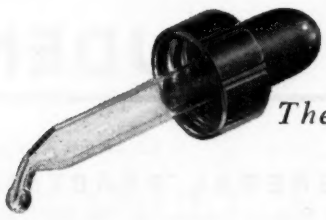
The Anatomy and Physiology of Obstetrics

A Short Textbook for Students and Midwives. C. W. F. BURNETT, M.D., F.R.C.S., F.R.C.O.G., obstetrician and gynæcologist, West Middlesex Hospital. London: Faber & Faber. 1953. Pp. 168. 15*s*.

THE opening chapters of most standard obstetric textbooks give, somewhat briefly, the essentials of the special anatomy and physiology. This is quite sufficient for the medical student, when taken in conjunction with his intensive preclinical studies, but may fall short of the ideal for the pupil midwife. This book sets out to remedy this deficiency. It is an easily read book, even though it inevitably contains much listed information. There are many useful illustrations by Susan Robinson, medical artist to the West Middlesex Hospital, and the contents include the anatomy of the female pelvis, the physiology of the female generative organs, including the breast, both in the non-pregnant and the pregnant state, and the development and physiology of the fœtus. Indeed, it gives all the necessary groundwork for an understanding of obstetrics, and can be recommended for that purpose.

Bacterial and Mycotic Infections of Man (2nd ed. Philadelphia and London: J. B. Lippincott. 1952. Pp. 886. 60*s*.).—The author or editor of a textbook of bacteriology for medical students can write either as an applied botanist, who catalogues seriatim the bacteria parasitic on man and describes their characteristics and habits, or as a doctor whose interest lies in the special pathology of infectious disease. The first has always been the more popular. It can be made, within the limits of an examination syllabus, a logical and illustrative study of parasitism, and has the merit of giving prime importance to Pasteur's doctrine of the specificity of infection. Nevertheless the subtle attractions of bacteriological method often lead an author to give too much emphasis to the form and economy of the parasite, and to the distinction in vitro between one parasite and another, and too little to the host and its reactions to infection. These latter the student will see daily under other names in the wards, and one of the urgent needs of medical education is the integration of teaching at the bedside and in the laboratory. In this book, Mr. René J. Dubos, PH.D., and his collaborators, attempt a compromise. After a preliminary description of the nature of bacteria they survey clearly and with apt illustration the general problems of infection and resistance. There is no harder task than the exposition of general ideas to those with limited knowledge, and the authors of these chapters have succeeded uncommonly well. Perhaps the allergic state receives more attention than most would think necessary; and it is disappointing to find no adequate appraisal of the risks inherent in giving antisera, for this is a problem which many young doctors must face and on which they seek advice. A chapter on the human blood-groups is here surely for historical reasons only: they have little to do with bacteriology. When the authors approach the specific infections successive chapters are devoted to arbitrary groups of organisms, some of which have affinities of form and some of behaviour. The catalogue is inclusive rather than selective but has the general plan of illustrating the several ways in which bacteria may attack the human body. It succeeds well; and though *Corynebacterium hoffmani* appears illogically in a chapter which introduces the subject of exotoxins, it would not be easy to suggest where else it might be accommodated. Indeed, applied bacteriology is not likely to be a logical subject for many years to come. These chapters deal in order with the history, morphology, cultivation, variation, and pathogenicity of the species or group of species: after these come resistance and immunity, diagnosis, treatment, and epidemiology. The facts are accurate, up to date, and supported by well-chosen references. Each chapter is the work of one or two experts, and all are good. The book goes on to describe the natural flora of the body, chemotherapy, and sterilisation. Professor Maxcy's chapter on the principles of epidemiology compresses into a few pages great truths and much wisdom; and the book ends with a refreshing approach to diagnostic bacteriology.

Good and accurate, though this work is, it is still not sufficiently full to serve for reference. On the other hand, it is in some ways too full for medical students. Every student tends to forget the wood and remember only the trees, and it is simply tempting Providence to include—for instance—the statement that two observers claim to have observed motile streptococci, or to include (tempting snare for a retentive memory) a vast table distinguishing 31 strains of streptococcus by 37 cultural or biochemical characteristics. Nor is it useful to give occasionally the formulæ of culture media; either each chapter should give the formulæ for all the media used, or (better) they should be relegated to an appendix, or (best) they should be omitted. If the student's education is intended to produce a medical practitioner these details have no part in it, and if the examination syllabus really demands the memorising of a mass of such technical details then the quicker it is changed the better. They only make the book too long, too heavy, and, in spite of generous support from the American National Foundation for Infantile Paralysis, too costly. Nevertheless it is a distinguished book.



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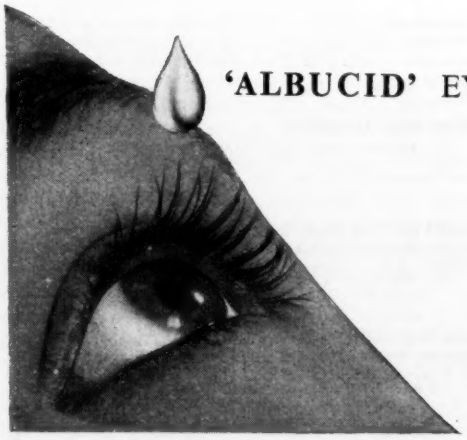

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LONDON: SATURDAY, SEPT. 5, 1953

Talking of Teachers

IN this era of jet propulsion the clinician hurrying to his international conference is a familiar figure. For the stout heart who chooses medical teaching, as a career rather than a somewhat irksome sideline, the world of conferences is often a smaller one. His travelling scholarship may give him one splendid expedition, but the regular voyages to distant conferences are not, as a rule, for him. He may therefore miss a direct contact with important happenings in the wider world—for example, the teaching experiments that are in hand in the American medical schools (Dr. DAVID SINCLAIR and Dr. JOHN PEMBERTON describe some of them in their articles this week)—though direct contact is so much better than second-hand news. If he does travel, it is usually to some cosy congress nearby, where he can talk with others of his kind, about his own particular line of country in research, forgetful of the larger scene. And so the first World Conference on Medical Education, which gathered in London last week, came as a welcome opportunity for medical teachers, the regulars and the not-so-regulars, to meet their colleagues from all over the world and to discuss a subject that occupies much of their time and should perhaps occupy more of their thoughts.

It is unfortunately true that many people are nowadays conditioned, through some illogical reflex, to regard research as wholly admirable and teaching as its unavoidable concomitant. This attitude towards teaching is a product of the twentieth century, and it is certainly not confined to medicine; there are few school-teachers nowadays who command the respect once paid to the dominie. The situation is clearly reflected in the press: among the articles in the medical journals in the English language there are number upon number dealing with the techniques and the results of scientific investigation for every one that is devoted to the methods of teaching and to the difficulties of deciding what the medical student really should know. The daily papers, and their mighty contemporaries, the Digests, are zealous and eager in reporting anything that looks like a scientific discovery, and now and then they even report it before it has been discovered. But teaching is not news; there are no headlines for the demonstrator or the lecturer. This is perhaps because the processes of teaching are repetitive and, it may seem, humdrum. Students are exposed, like a photographic emulsion, to certain ideas at certain times in the curriculum; they work out a specified set of problems in a certain way; and the result will be—within the limits of biological error—a predictable type of doctor. Among other things in its comprehensive programme, this successful conference considered the practical details of how to teach; and we hope it will also have helped to dispel the surprisingly common attitude that anybody can teach, and that the teacher really ought to find a proper job to go with his teaching.

But as everyone knows, the general run of folk can *not* teach, even though they may go through all the prescribed motions of teaching. Is it not perhaps time then that more attention was paid, not only to the training of medical students, but also to the training of their preceptors? It may even be that good teachers are born and not made, but Providence has so far been neglectful in this department of her affairs, and, while we are waiting, there is little doubt that indifferent teachers would become better if they could be persuaded that the effort was worth while. There can be little question of the rigorous selection of embryo teachers so long as we are glad to get anyone to undertake what is regarded as a humble task at what is often a humble salary; but some further effort could and should be put into teaching teachers the techniques of their craft. For who has not sat through inaudible and incomprehensible lectures; who has not been bewildered by an endless succession of lantern-slides, or a breathless sequence of illegible formulæ appearing momentarily in the top left-hand corner of the blackboard?

The training of medical teachers was not originally among the subjects in the formal programme of last week's conference, though happily it got in, as it seems, at a late hour. Dr. R. D. LAWRENCE commended the idea of weekend meetings at which junior teachers would have their technique criticised by the experts. Methods of teaching are being considered by a committee of the Royal College of Physicians; and, at Hammersmith, the Postgraduate Medical School of London has already made a profitable start, along the lines mentioned by Dr. LAWRENCE, in the matter of teaching in the clinical period.[1] It is in this part of the curriculum that the teaching of medicine is radically different from that of other subjects; here the patient is the most important person; and here the young teacher could perhaps be most usefully offered guidance in his choice of methods. More experiments on the Hammersmith pattern would be a good way of making a start. Again, there are colleges for the training of certain kinds of teacher; but it seems that the university teacher, in medicine and in other faculties, is considered to know his job when he knows his subject. Does a medical degree necessarily carry exemption from further systematic instruction on how to teach? In urging this case, we should not overemphasise the importance of the formal teaching that can be found in textbooks. There is another, and far greater, skill in commenting on the groundwork of established knowledge, picking out the growing points, and relating these to allied subjects. In this way, as Prof. MELVILLE ARNOTT told the conference, the student is educated, as he should be at a university, rather than instructed, as he might be at a technical college. The master teachers—those who have stimulated and influenced their students—have taught in this way; and nearly all have at the same time led in the field

1. See *Lancet*, 1951, i, 1408; *Ibid*, 1953, i, 135.

of research. Unhappily such masters are few; for the happy conjunction of an original turn of mind with capacity, or willingness, to teach is rare indeed.

If we are not to make the lot of the teacher even less attractive than it is, we must be more considerate than merely to tell him that he has to learn a second job after he has qualified for the first. If the selection of teachers of medicine, in all its branches, is to be more deliberate than hitherto, as Sir LIONEL WHITBY suggested in his presidential address to the conference, then the teachers should be more generally acknowledged and respected for what they are—skilled specialists who need no other prop to sustain their professional reputation.

Introduction to General Practice

AT this time last year we welcomed the signs that medical schools were giving more thought to the important question of introducing the undergraduate to the ways of general practice.[1] Only a few months earlier we had noticed, in a symposium in a hospital journal, two disturbing, almost frightening, statements on general practice—one by a student and the other by a newly qualified doctor. The student's bitter thought was that general practice would not be without its rewards "if you do not demand complete responsibility, if you have no interest in original work, and if you have plenty of energy"; and the young doctor said that, for him, the most important consideration in choosing a general practice would be to ensure that he went to an under-doctored area, "for the doctor must be able to dispose of patients who are just a nuisance." And these were only some of the reasons why these young men were turning, it seemed almost with a shudder, from general practice. This unhappy attitude reflected some grave fault in our system of education, perhaps a more fundamental one than any revision of the medical curriculum could alone correct. But, as we suggested at the time,[2] one way of improving things would be to give medical students some instruction in the meaning, purposes, and responsibilities of general practice. The idea, of course, was no novelty, and much valuable teaching along these lines had already been done—notably by the Scottish "dispensary" system. But many medical schools had shown little interest in this side of the curriculum, nor indeed had many ventured an opinion on its merits. But a year ago there were clear signs of activity, and the past twelve months has seen much progress. The schools have now really got to grips with the subject, and the news given by the deans in later pages of this issue tells of plans in action and plans prepared. Others have taken up the theme, and two useful documents have appeared in the past few months, which sum up what has been achieved and point to likely lines of progress.

The Foundation Council of the College of General Practitioners appointed an undergraduate education committee, which has lately (and with a promptitude that sets a new standard for committee reports) put out its views on the teaching of general practice by general practitioners.[3] In February the college sent a questionary to the deans of the undergraduate medical schools in Great Britain and Ireland. The replies showed that nearly all of these 28 medical schools already provide, or will do so shortly, some opportunity for the teaching of medical students by general practitioners. The second report, a survey undertaken for the British Medical Students' Association by its education officer, Mr. R. W. HESLOP, says that of the 21 schools in the United Kingdom which offer facilities for clinical study and which are affiliated to the B.M.S.A., there are 9 in which general-practice schemes are officially recognised or organised. In many of the schools that have not yet introduced this kind of teaching, the subject is under consideration, and in some, such as Manchester, the nature of the scheme has already been decided. All the existing schemes, Mr. HESLOP finds, have been enthusiastically received by the students, and are working satisfactorily. There has been no adverse criticism of any importance.

Looking forward, the College of General Practitioners suggests that all medical schools should examine the different schemes that are in being, and that they should coöpt general practitioners to their staffs to teach students certain important aspects of general practice. The committee believes that there are many practitioners who, having had to learn the hard way, will be willing to do everything they can to help younger men to avoid the difficulties they themselves encountered in their early days. But, as Dr. JOHN HUNT, honorary secretary of the Foundation Council of the college, pointed out at the World Conference on Medical Education, there may be difficulties at first in finding enough doctors who will coöperate fully in the plan until the medical schools, and perhaps the Ministry of Health, give them some official extramural status. There are those who would oppose this, and indeed the whole principle of teaching general practice, on the grounds that it cannot really be taught by anyone. Certainly there is nothing to support this view in the results we have seen in the past few years or in the welcome given to the new arrangements by the students, who may judge impulsively but whose opinions often turn out to be near the mark in the end. As Dr. HUNT said last week, the teaching of general practice may well call for a different technique from the familiar lectures and demonstrations of hospital teaching; indeed, it seems that the lecture is unlikely to prove an important item in the new part of the curriculum. Whatever the most successful formula may turn out to be, it obviously cannot do more than introduce the student to the questions that arise in looking after patients in their homes and in the surgery. But the surface of the subject can be broken, even though it cannot be taught, in the fuller sense, in the time available; and it must be broken if the entry of the young doctor into practice is to be an easy step forward in his path, and not a sudden plunge into an almost unknown world, as it has too often been in the past. The second report[4] of the World Health Organisation's committee on medical education emphasises that the primary aim of undergraduate education should be to prepare the student for postgraduate studies leading to a particular branch of medicine, the most important

1. *Lancet*, 1952, ii, 415.
2. *Ibid*, 1952, i, 495.
3. *Brit. med. J.* July 4, 1953, p. 36.
4. Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel. Second report. *World Hlth Org. techn. Rep. Ser.* 1953, **69**. Pp. 26. 1s. 6d. Obtainable from H.M. Stationery Office, P.O. Box 569, London, S.E.1.

being general practice. Moreover, in the committee's view, the student should be taught from the very beginning of his course to consider the patient as a social organism, not merely as a clinical case; and preventive and social medicine should play an important rôle early in the curriculum. Clearly one of the best places for the student to learn the social implications of clinical medicine is in the context of general practice. Here too there are unique opportunities, as yet largely unused, for research in this and other subjects; and there is news this week that the College of General Practitioners has set up a committee and an advisory panel to encourage research in general practice and that a research register has been opened.

The subject of general practice is vast and the undergraduate's introduction may be brief: but it was probably the lack of any introduction at all that was largely responsible for the attitude of the student and the newly qualified doctor to whom we have referred. The briefest glimpse of what a well-run practice can do and the satisfaction that the work can give to the doctor would almost certainly have changed their outlook and maybe their future. General practice, in whatever area, is largely what the individual practitioner is prepared to make it; and the new teaching must aim at showing the student what can be made of it before, and not after, he has spent his first day, bewildered maybe and disillusioned even, in his new practice.

The Preregistration Year

THE Medical Act of 1950 introduced a compulsory year of preregistration house-appointments, and the Act is now in its ninth month of operation. By all accounts (and the deans of the medical schools give some in our Students' Guide this year), the gears of the new machinery have engaged smoothly and it is in efficient motion. Indeed, if ever a reform had unanimous support it was this one; for, as Sir DAVID CAMPBELL, president of the General Medical Council, pointed out at last week's conference, every committee on medical education in recent years has been strongly in favour of the compulsory preregistration period. So it was surprising to find, even in the agenda of a world conference, the question: Is an intern year necessary? It certainly is: both the newly qualified doctor and his patients-to-be will benefit from it. But there are one or two aspects that might usefully be reconsidered as the new arrangements go forward.

Speaking to this rhetorical question, Sir DAVID commended the machinery of the Act, in its educational clauses, for the way in which it placed squarely on the universities the duty of approving hospitals and posts, and of keeping an eye on the training and experience that they offer. If medicine is a discipline, a true university subject, then clearly it must supply more than mere technical proficiency; and, as the planning committee of the Royal College of Physicians emphasised, medical education has two aims—educational and vocational. The first is directed at equipping the student to profit by experience during his training and for the rest of his life; the second at building up a store of knowledge adequate for the practice of medicine—that is, at making him technically proficient. In Sir DAVID's view, the vocational objective should predominate in the postgraduate year, thus offsetting the danger that the educational side may receive too much attention in undergraduate days. The State, he said, must in the interests of the public concern itself with technical ability first and the broader proficiency second. There are some perhaps who may question the wisdom of vesting in the universities the responsibility for judging technical proficiency. Under the 1950 Act the universities and the licensing bodies grade hospitals and decide which house-appointments are suitable for the compulsory year. Since the National Health Service Act came into force in 1948, the universities have been given a leading share in shaping and administering the hospital medical services. In this way the hospitals have gained wise and impartial guidance; but, at least outside London, this arrangement has placed in the hands of a few university representatives—and notably the professors of medicine, surgery, and obstetrics—extensive powers that they have not sought and may feel uneasy in wielding. It has been suggested that a similar uneasiness may hamper the discharge of their duties under the 1950 Act. Yet though the present delegation of responsibility should not be regarded as irrevocable, we can see no evidence that the universities are unequal to this added task. On the face of it, it is certainly logical to give charge of what is, in effect, an extension of the curriculum to those who are responsible for the whole; and it is not easy to see what other plan, short of drawing the reins of the Act more closely into the hands of the General Medical Council, could have been proposed.

There are some other matters of more immediate interest. Most people agree that the early twenties is the most profitable training age for the young scientist. The three or four years after the final examination is often the time when ideas come most easily and when new techniques are most readily devised. But few undergraduates begin their medical training before the age of eighteen; the shortest university course is five years (even with exemption from the first year); so the average medical student is all but twenty-four before he qualifies, even if he does not do his National Service until later. With a year in resident jobs and two in the Services, he is twenty-seven or thereabouts before he has had any real opportunity to undertake serious postgraduate work in such specialty as he may fancy. There are, of course, many advantages in this slower and wider approach; but should it be the one and only path? For one thing, the early ripeners might do better if the initial period of study were reduced and reconstructed. Dr. DORNHORST, whose article we publish in this issue, would like to see a radical change in the existing order of things in the medical curriculum, and he suggests that the student could profitably be taken into clinical work at the very outset of his career. Certainly a shorter and more direct approach to clinical medicine, the ultimate objective of most students, would make the path less formidable than it now seems to many of them. Now that the medical course is, in effect, longer we must be all the more ready to consider whether some of the one-way traffic might not with advantage be diverted by these or other routes.

When it comes to choosing the house-appointments for approval as preregistration jobs, it is the post of

casualty officer that arouses most debate. In our correspondence columns last month, Dr. DYKE [1] suggested that the present shortage of casualty officers could be relieved by recognising more of these jobs as qualifying for full registration. But, as other correspondents have pointed out, the experience may be too rich and the responsibility too great for the newly qualified man. The post of casualty officer has been one of those traditionally held in the first year or so after qualification; but unless the young doctor in the casualty department can turn immediately to a senior colleague for advice, and unless that colleague is prepared to set aside much of his time for this purpose, then the casualty officer is in a difficult, even a dangerous, position, as several recent actions for damages have shown. If this support is not readily to hand, the post of casualty officer should usually be a more senior appointment, not included in the pre-registration plan. The extra year, it is hoped, will teach the graduate something more of the workaday conditions of medical practice than he has hitherto learned before being asked to stand on his own feet. Even though much more is now being done to introduce the undergraduate to the methods of general practice, should not the year include, say, three months in this, the largest branch of the doctors' work?

Whatever changes in the details of the plan may be contemplated in the future, it is clear that one of the most important reforms in medical education in this country has been soundly planned and fairly launched.

Annotations

SCIENCE AND SCIENTISTS

THE British Association, which first met in Liverpool in 1837, has returned this week to the city for its annual meeting. In a presidential address Sir Edward Appleton, F.R.S., spoke of Science for its Own Sake. Science, he declared, has interest as well as utility; it is illuminating as well as fruitful. It has been said that when science enters the door, enchantment flies out of the window; but such a view stems from the days when the solid "classical" physics were being mapped out. Modern science, ranging in its explorations from the heart of the atom to the frontiers of the universe, reveals depths and mysteries beyond, and different from, the ordinary matter-of-fact world. "Science has given back to the universe, one might say, that quality of inexhaustible richness and unexpectedness and wonder which at one time it seemed to have taken away from it."

The scientific approach is a far more personal and imaginative activity than is sometimes realised; the big jumps ahead usually derive from the adventures and intuitions of a single mind. Scientific activities are two-fold: the gathering of facts, and the expression of any discoverable order in them as a hypothesis or a theory. In experimenting, the important thing is to ask Nature the right question, in its most direct form; and often the terms of the question have to be recast. "In this complex process it is as if knowledge were playing a game of chess with the mind, and one has to be constantly on the alert with fresh tactics or even a changed strategy."

As an exercise science is one of the most complex and far-ranging of mental experiences. But there are other values and other experiences: at the opposite pole there are the ways of thought whose concern is with the things that will not be superseded; and today we need these enduring values:

"At any one moment we may have only a precarious hold on a temporary truth and our consciousness of this ever urges us to seek fresh truths and new understandings. I fear that, in doing so, we may lose sight of other aspects of life which have their values too . . . there is a virtue in contentment, in being satisfied with what we already have, which we shall not learn from science. Our vocation, in other words, cannot be the whole of life, for it cannot satisfy all our needs."

BODIES FOR DISSECTION

SINCE the time of the resurrectionists the supply of bodies for dissection by their students has always been a problem for professors of anatomy, and today they still have their difficulties. As Sir Cecil Wakeley remarked at the conference on medical education last week, the best way for the student to learn human anatomy is to dissect the whole body for himself, but the shortage of bodies and the large number of students means that this ideal is hard to attain. In 1951–52, for instance, 638 bodies were available for 4685 students and most anatomists agree that they could use half as many again. Ideally there ought not to be more than two students working on one part. In practice three and even four students to a part is not unusual. If more bodies were available they could be used with advantage by postgraduate students of surgery and by dental students. In the London area students for the L.D.S. diploma at present have no opportunity for dissection. The supply of bodies varies in different parts of the country. For example, in the West Country it is fairly good, in Newcastle upon Tyne it is poor, in Scotland it is inadequate, and in Northern Ireland it is difficult.

Since Goodman [1] reviewed the situation in 1944 the Poor Law has been abolished and the National Health Service introduced. Those social changes have decreased, though less than might have been expected, the number of unclaimed bodies from institutions, which is the main source of subjects for dissection. Clearly the only hope of increasing the supply is by encouraging more people to leave their bodies for dissection. The number of bequests, though still small, shows a steady and encouraging increase. In 1937–38 it was 27, in 1951–52 119.

The procedure is simple. The legal right to the disposal of a body rests with the executor, next of kin, or any other party in whose custody it may be at the time. A person may, however, express a wish that his body should be used for teaching purposes. He should leave with his papers a written statement of his wish. He can obtain the necessary forms and instructions from H.M. Inspector of Anatomy, Anatomy Office, Ministry of Health, Savile Row, London, W.1, or the Anatomy Office, St. Andrew's House, Edinburgh. A body may be left to a particular medical school, but it is better that testators should allow their bodies to be sent to the medical school which is most convenient at the time of death. The medical school will later arrange and pay for a simple funeral.

The new Corneal Grafting Act has caught the public's imagination and may indirectly help the teachers and students of anatomy as well as the ophthalmic surgeons. Several people have inquired at one provincial school, for example, whether it would be possible to bequeath both eyes and body for the purpose of corneal grafting and anatomy, and the department has made suitable arrangements with the local eye hospital to carry out this wish. Certainly only by explaining the need to the public will bequests be maintained and increased. It is interesting that an appeal in a popular paper with a large circulation has produced little result, while a paragraph in a quarterly read by serious-minded people produced several bequests. This is a form of public service in which doctors can help by precept and by example.

1. Dyke, S. C. *Lancet*, Aug. 15, 1953, p. 341.

1. Goodman, N. H. *Lancet*, 1944, i, 671.

FIRST WORLD CONFERENCE ON MEDICAL EDUCATION

MORE than 600 delegates from 59 countries attended the First World Conference on Medical Education, held in London from Aug. 22 to 29. The conference was organised under the auspices of the World Medical Association, in collaboration with the World Health Organisation, the Council for International Organisations of the Medical Sciences, and the International Association of Universities. The British Medical Association acted as host. Opening the proceedings, the President, Sir LIONEL WHITBY, said that no-one would doubt that the conference was timely, if not long overdue.

Miss PATRICIA HORNSBY-SMITH, Parliamentary Secretary to the Ministry of Health, welcomed the delegates on the Minister's behalf. She said that in this country we had always specialised in practical bedside teaching, whilst others had laid greater stress on the academic approach. Yet both were now in difficulties with the accumulating mass of scientific fact and the multiplication of specialised technique.

Sir ANDREW DAVIDSON, who represented the Secretary of State for Scotland, said that medical education in Scotland had often been described as a national industry with a large export trade. Between the two great wars about one-third of all doctors graduating in the United Kingdom received their training in Scotland, although Scotland had only one-ninth of the total population. That proportion was falling, but the prospects were that the Scottish schools would continue to supply a substantial number of doctors—probably about a quarter of the total in the United Kingdom.

Prof. CHARLES HARRIS, who spoke for the University of London, said that London, with its 12 medical schools and students from other universities, had a good opportunity to compare teaching methods. In London pathology was taught in the clinical years; at Cambridge it was treated as an academic subject in which students attained an advanced level before they dealt with patients. Professor Harris added that he was still not sure which was the cart and which the horse. The result depended so much more on the student than the order in which he was brought to his subject.

Dr. DAG KNUTSON, chairman of the council of the World Medical Association, brought greetings from the association. He warned the conference that what was a solution to the problems of medical education at the beginning of the century was not a solution today, and they might fear that at the end of the century another solution might have to be found.

Dr. M. G. CANDAU, Director-General of the World Health Organisation, said that each country must devise its own medical education. It was important that new ideas should be given a reasonable and critical trial, and that the experiences of one country should be made known to others.

The delegates were also welcomed by Dr. E. A. GREGG, on behalf of the British Medical Association, by Prof. J. MAISIN, president of the Council for International Organisations of the Medical Sciences, and by Prof. S. C. ROBERTS, vice-president of the International Association of Universities.

A banquet was held at the close of the conference. Dr. LOUIS H. BAUER (U.S.A.), secretary-general of the World Medical Association, responding to the toast of The Association, proposed by Sir ARCOT MUDALIAR (India), recalled that the association's first general assembly was held in Paris in 1947. The aims included liaison between doctors of different lands. Doctors, he declared, spoke a common language; and such liaison was a powerful influence in improving international relations. Miss PATRICIA HORNSBY-SMITH, M.P., spoke for The Guests, in reply to Dr. DAG KNUTSON. Sir LIONEL WHITBY, replying to the toast of The President, paid special tribute to the work of Dr. Hugh Clegg and Dr. E. Grey Turner in preparing for the conference.

Opening Plenary Session

In his presidential address, Sir LIONEL WHITBY defined the ideal medical student—cultured, broadly educated in the humanities, intelligent, and intellectual, of transparent integrity, humane and sympathetic, and, above all, one who would love his profession as well as his fellow men. It would be clearly impossible for all students to attain such an ideal, but all should have at least some of these qualities either inherent or capable of development. In all countries it was important that the medical profession, while being technically competent, should also be of such intellectual and social prestige, and of such unquestionable integrity as to command respect in the councils of the nation, the province, and the community. Medical students must be recruited on individual qualities and ability, quite independent of family, of personal fortune, of class or family distinction, save that a cultured philanthropic family tended to foster desirable qualities.

Turning to the education of the student, Sir Lionel called for more deliberate selection of future teachers, in order that some might be chosen for their teaching capabilities. There was much to be said for a wider use of some form of tutorial system in teaching medicine. The doctor of the future would have to be grounded more firmly in the basic sciences than the student of 20 or 30 years ago. But there was evidence that there was now some poverty of mind because of a lack of general education. Sir Lionel thought that a student should receive continuous and lengthy instruction only in the common and basic and useful and everyday clinical problems, but he should lose no opportunity of a single experience in rare or specialised procedures. Training should provide the student with a foundation for his after-career in any branch of medicine. It was his post-graduate apprenticeship and narrower studies which finally completed the doctor's early education in the branch of medicine he elected to follow, whether this was general practice or a specialty.

Sir RICHARD LIVINGSTONE chose as his title What is Education? He could see no use in a student being taught the elements of chemistry and physics without ever having an idea of their meaning and use, or any conception of the fascinating truth that one could transform things by analysing them into their constituent elements. Science, though in different forms, must have a place in all education, for the material universe was the stage. But the drama was human and the actors were men, so history and literature must enter into any education, for they were the chief records of man and his ways. Sir Richard thought that the standard of learned articles had not been improved by the decline in the study of Latin and learning by heart, and he emphasised the value of learning to define words as a way of making people think and express themselves clearly.

An education was incomplete unless it left people with a philosophy of life. His own conviction was that Christianity would again become the philosophy of the Western world. Meanwhile could an interim philosophy be found? There was a philosophy which gave standards of value and judgment that applied to all spheres and activities of human life—he called it the Philosophy of the First-rate. There was only one way of getting to know the first-rate—by seeing it; and that was the way

in which it could be taught. He imagined that the medical student would learn more by seeing a great surgeon at work or by going round the wards with a great doctor than all the textbooks in the world could tell him. At present civilisation was a curate's egg civilisation—some of it excellent, some of it fourth-rate. Yet it was an age of great vitality, of unlimited powers and possibilities, too often frittered away or misused. The more reason then that education should train youth to desire, recognise, and pursue the first-rate.

Dr. JOHN F. FULTON, Sterling professor of the history of medicine at Yale, traced the history of medical education throughout the world. Among recent developments, he recommended for further attention "the problem of the liberalisation and lightening of the entire medical curriculum, the elimination of outmoded and unused areas of instruction, with the ultimate end in view of shortening the curriculum so that an able man may, with adequate training, go into practice and become financially independent and scientifically productive in a period of less than the eight or ten years now regarded as essential." Another phase of medical education which, he thought, urgently required consideration was the creation of halls of residence and common-rooms, where students of all faculties could come together; for there was no more stultifying tendency among young physicians than to be sufficient unto themselves, and thus lose contact with the broader humanistic interests that made fully educated men and women.

In his address Lieut.-Colonel S. M. K. MALLICK, dean of Dow Medical College, Karachi, discussed whether medicine was a technology or a profession. The absence of sustained emphasis on the classical background of the profession during the undergraduate training had materially altered the outlook of medical students. They had begun to regard their medical education as a vocational training, and the general public seemed to have gained the same impression. Nowadays young men chose specialisation because it brought a rise in status as well as more money. There was a danger that the study of specialties might ultimately swamp the basic general education that a university discipline was calculated to impart. Among the internal dangers that faced the profession today, the foremost, paradoxically enough, was the great development in techniques. Under the stress of time and of market demands, we had turned to the mass production of medical specialists. Dr. Mallick felt that the solution lay in a return to the time of the general physician and the general surgeon.

Dr. T. C. ROUTLEY, general secretary of the Canadian Medical Association, responding to Dr. Mallick, said he had sent this question to 200 Canadian doctors: 153 had replied within ten days, and 151 of them thought that medicine was a profession; only 2 thought that medicine, as practised today, was more and more degrading itself into technology. Dr. Routley mentioned some of the comments he had received in answer to his question: "Medicine is not an exact science, therefore it can never be called a technology"; "technology completely lacks the comprehension of the doctor-patient relationship"; and "a patient requires more than technology—kindness, sympathy, understanding, human interest." He thought that much responsibility lay with the profession to maintain the professional position that its practitioners must for ever occupy.

The Sections

Requirements for Entry into Medical Schools

Vice-president: Dr. VICTOR JOHNSON

This section (section A) dealt with two main questions: what kind of education is most suitable for the aspirant to medicine?; and, given a larger number of applicants than places in a medical school, how can those best suited for the profession be selected?

In his opening remarks, Dr. VICTOR JOHNSON, of the Mayo Foundation for Medical Education and Research, said that we aimed to choose people who had intelligence, emotional stability, aptitude, motivation, industry, warmth, and kindness. We may be able to measure intelligence and aptitude; as yet we could not measure emotional stability, nor distinguish between real and fancied motivation, but we must never stop trying. He affirmed his faith in the educational value of natural science, which should be taught without apology as an indispensable ingredient of human culture.

GENERAL EDUCATION IN AN AGE OF SCIENCE

The discussion on this subject was opened by Mr. T. E. B. HOWARTH, of Winchester College. We should aim, he said, to provide the student with as much guidance in the human situation as was possible. Others in the discussion seemed to accept this implicitly, but there was considerable disagreement as to how it was best done. Mr. Howarth suggested that the study of great literature and of history provided the best means of helping the student to understand human values. Prof. A. P. THOMSON (Birmingham), on the other hand, eloquently defended medicine itself as a humane discipline. He also stressed the paramount importance of mathematics in helping the student to form sound opinions—"let him have mathematics," he said, "and I will teach him the humanities in the ward."

Two other ways of achieving better adjustment to the human situation were suggested. Dr. CHAUNCEY D. LEAKE (Texas) made a plea for some training in the principles of individual and social psychology, to give the student "the intellectual and emotional tools by which he may probe and improve his own personality and his own social adjustment." This direct approach to understanding one's self and others aroused surprisingly little further comment. Prof. T. S. SIMEY (Liverpool) presented a well-argued case for the study of social history and social anthropology as ways of understanding what complex interacting factors make people behave the way they do; but again there was little discussion. Perhaps by the time the Second World Conference on Medical Education meets, a tempered climate of opinion will encourage discussion of these very radical ways to "know thyself."

HOW MUCH?

Unlike psychology and sociology, biology, physics, and chemistry are well recognised as basic to medicine, and the section was concerned with how much and what kind. Here, it seemed, opinion was favouring more and more the teaching of the "applied" rather than the "pure" aspects of these subjects, and this not merely because the curriculum *must* be lightened somehow, but because of a growing appreciation of the pedagogical advantages of giving culture through "specialisms." Prof. H. C. BURGER (Utrecht) briefly described a course of medical physics, and Prof. E. C. DODDS, F.R.S. (London), spoke in favour of concentrating chemical education on the study of those substances which occur in the body. Professor Dodds gave an encouraging account of the organisation of teaching of chemistry at all stages; which not only gave an integrated course but actually saved time. A hopeful sign was that several people seemed to be reassessing the value of time and energy consumed in laboratory work in the sciences. Dr. MOGENS PIHL (Denmark), for instance, doubted the value of experiments in physics; we should

inquire into the relation between what the teacher aims at giving and what he actually gives.

SOME ASPECTS OF SCIENTIFIC TEACHING

Prof. A. PAZZINI (Rome) and Prof. M. MOUQUIN (Paris) spoke on Teaching the History of Science; Prof. G. NYLIN (Stockholm) and Prof. H. SCHULTEN (Cologne) on Teaching the Scientific Method; and Prof. P. BONNEVIE (Copenhagen) on Science is Measurement. Opinion seems to vary as to the relative importance of these aspects, judging, for instance, by the number of chairs of history of medicine in different countries and by the time allocated to its teaching. Professor Bonnevie said that the medical course should be "statistically minded throughout" and that every teacher in any medical specialty should use every opportunity to demonstrate the need to use the statistical way of looking at observations. Similarly, it was said that the history of medicine could be introduced not necessarily as a specific course, but with reference to outstanding people or events, as and when suitable topics arose. Dr. RAYMOND WHITEHEAD (Manchester), rapporteur to this section, indicated in his masterly summing-up that the conference was not warmly unanimous about the claims of mathematics or of the history of medicine. Perhaps the explanation of any such coolness lies in the suggestion that responsibility for teaching these subjects should be shared by all.

SELECTION OF STUDENTS

The section heard of the requirements for entry into medical schools all over the world and of methods used for selection. The practices varied enormously and the detailed reports, when they are published later, will be of particular value. Most schools, it seemed, selected before entry, but a few allowed unrestricted entry and eliminated on the result of university performance.

The interview as a means of selection aroused much interest, and opinions ranged from complete disbelief to firm faith in it as the supreme test. Perhaps it is that the burden of responsibility of selecting is so great that selectors just have to believe in something.

Sir FREDERICK BARTLETT, professor of experimental psychology at Cambridge University, speaking on the use and value of intelligence and aptitude tests, announced some of the findings of the Medical Research Council's unit which began an experimental study of the selection of medical students some five years ago. Intelligence tests were found to have no predictive significance relative to success in 1st M.B. and 2nd M.B. examinations. Unless there was something the matter with the examinations, Sir Frederick said, it would be fantastically silly to rely on intelligence tests for selecting medical students; there is however a critical point in the scores, and a student whose score is lower than this is extremely unlikely to pass his examinations. Sir Frederick pointed out how little we knew about transfer of achievement or training, and how supremely important this was in a rational approach to any form of selection or training. What he said in this context was very pertinent to all the questions that were discussed in this section; to the relative claims of the natural and social sciences, or of literature, for teaching the "humanities"; to whether, in teaching students to be scientific in the laboratory and artistic in the picture gallery, we are teaching them to apply science with artistic judgment at the bedside; and to whether, in interviewing a candidate for admission, we can with any degree of certainty predict how he will behave twenty years later.

Aims and Content of the Medical Curriculum

Vice-president: Sir ARCOT MUDALIAR

In section B the subjects discussed fell into two groups: first, those concerned with the vocational aspect of medical training, and, second, the features of the curriculum which make for true education. It was generally agreed that at present we fail to some extent in both these aims. This is due to the enormous growth of medical knowledge during the past thirty years, which has vastly increased the factual content of the curriculum and has led to the fragmentation of the old primary teaching subjects into numerous subdivisions whose specialist exponents naturally believe in the great importance of their own subject. All speakers held that the time had come to simplify and unify the curriculum.

The anatomists spontaneously suggested that the essentials of anatomy could be taught in three terms instead of five, though opinions differed upon the need for the student to dissect the whole body himself. Many were in favour of combining anatomy and physiology in a single coördinated course. Prof. S. ZUCKERMAN, F.R.S., spoke of the arrangement at Birmingham where such a course has been introduced. The main aims, he said, were: (1) to break down artificial barriers and unreal subdivisions of interest between the two subjects; (2) to avoid unnecessary overlap and discordant treatment; and (3) to eliminate burdensome detail.

With regard to clinical subjects and pathology, bacteriology, and pharmacology, opinion was strongly in favour of a broad, coördinated, introductory course. The student should be shown at this stage that the aim of medicine is to study and treat the sick person, and not only the disease, and that the problems of the sick person are closely bound up with personality and environment. To be truly successful this very broad approach must dominate the outlook of teacher and student from the very first contact with the sick person.

In the subsequent more detailed study of the principal clinical subjects it was declared that there is no substitute for clinical clerkships, outpatient clinical work, and the study of the patient in his home and occupational environment. We must never allow these aspects of medical training to be strangled by the growing preoccupation with scientific medicine.

Many speakers favoured synthesising the medical and surgical clerkships, though this would imply the reorganisation of our teaching hospitals into joint medical and surgical units. Dr. OLIVER COPE (Harvard) held that such a union would refresh both internal medicine and surgery, though he recognised risks; for instance the surgeon, preoccupied with techniques, would be tempted to leave preoperative and postoperative care to the physician. In the discussions on obstetrics and pædiatrics speakers referred to the value of these subjects in helping to teach the broader approach to human problems of health and ill health. There is need for closer attention to the physical, psychological and social problems of childbearing and, in pædiatrics, to the principles of growth and development and the problems of the child as a member of the family.

Everyone agreed that the principles of psychological medicine should pervade all clinical teaching, no matter what the subject. Prof. A. L. RICHARD (Ottawa) welcomed the growing recognition of the value of the humanities to a physician:

> "In addition to the basic medical sciences, he must have knowledge of psychology, of ethics, of sociology; and because he is dealing with persons he must also have a sense of values, a philosophy of life. It is a very serious mistake and a most childlike illusion to think that a doctor can do without it."

The compulsory intern year was welcomed, and it was hoped that this period of postgraduate vocational training might help to make room in the undergraduate course for more activities of a truly educational nature.

Throughout the discussion speakers urged that the aim should be to educate rather than to teach didactically. The dictum that true education is self-education

was clearly in the forefront of many minds. Some speakers advocated methods of learning in which the student plays an active part—clinicopathological and clinical conferences, and tutorial and discussion groups.

The meetings of this section left a strong impression of agreement on the need to unify and simplify the curriculum, to reduce the memorising of masses of detail which stultify thinking and self-education.

Techniques and Methods of Medical Education

Vice-President: Prof. A. HURTADO

In opening the proceedings of section C, Prof. A. HURTADO (Peru) said that the world-wide efforts that were being made to improve health lacked, in his view, the necessary basic foundation—the recognition that a good medical education was essential to the successful development of social and health programmes.

TEACHING IN THE HOME

Dr. KINLOCH NELSON, professor of clinical medicine in the Medical College of Virginia, discussed ways of bringing the medical student and houseman into closer contact with the actual practice of medicine. In some schools the senior students spent part of their time living with an experienced practitioner. Other schools were developing programmes to give the student experience with one particular group of patients. Others sent them to hospitals in smaller towns or rural areas to observe hospital practice of a different character. Some had various types of home-care service, such as that run by the Medical College of Virginia. Here, students answered patients' calls, travelling in radio-equipped cars provided by the city and the college; when seeing new patients the students were regarded and behaved as doctors, without anyone else having seen the patient or standing over them to advise or take charge.

Dr. JOHN HUNT, honorary secretary of the Council of the College of General Practitioners, said that many believed that an important addition to medical education during the next twenty years would be a carefully planned introduction of all medical students to family doctoring. It was true that at present half the British medical schools made some arrangements for their students to visit a practitioner and see some of his patients at home, but many of these schemes were voluntary, informal, and variable, and 14 of the medical schools made no such arrangements at all. It was manifestly wrong to say that it was impossible to teach general practice. It might well need a different technique from the lectures and demonstrations of hospital teaching, but everything that could be learnt could be taught, if enough trouble was taken. In the home, much could be learnt of the epidemiology, ætiology, and the earlier symptoms and signs of disease; of many aspects of emergency and other treatment; and of preventive medicine, convalescence, and aftercare.

Dr. G. O. BARBER (Dunmow, Essex) hoped that young students in contact with general practice as it was today would aspire to a higher standard than the slipshod methods that were sometimes tolerated.

THE LECTURE AND THE GROUP DISCUSSION

Prof. G. PATRICK MEREDITH, professor of psychology in the University of Leeds, gave three main reasons for the ineffectiveness of so many lectures: faulty delivery; the forcing of words to perform functions for which other media were more appropriate; and the distribution of the lecturer's attention between too many techniques. The lecture was not the appropriate medium for the presentation of factual information. Its primary function was the communication of theoretical concepts. Professor Meredith's impression was that in university teaching generally there were too many lectures. The discussion group was neither a device for imparting factual knowledge nor for presenting concepts. It was essentially adapted to exploring the implications of concepts and to answering all those questions which immediately arose in the mind when new concepts were grafted on to old knowledge. It gave students the opportunity for constructive thought on their own account and a discipline in verbal expression. Lectures and discussions had reciprocal functions: lectures supplied discussion groups with topics for discussion; discussion groups provided the atmosphere of personal relationship, and so made lectures fruitful. Both, of course, depended upon their careful integration with the non-verbal techniques, and upon a parallel discipline in the rigorous use of medical language. This integration depended on wise planning of the curriculum. The problems raised demanded detailed research, and they underlined the need for an Institute of Medical Education.

Mr. K. H. MCALLISTER, Further Education Organiser of the Somerset County Council, said that group discussion must justify itself by the way in which it facilitated teaching. The teacher must see to it that there was an even flow in the exchange of ideas and that the group went forward as an entity to the next stage, not, as often happened in the lecture, that the brighter members of the audience were the pacemakers. The group discussion was a democratic method of learning, and in the long run was a time-saver, for it brought many problems buried deep in the student's mind to the surface.

Prof. IAN AIRD (London) said that the technique of group discussion was rather difficult at first, but it became obvious that it could have real and practical application to clinical teaching.

THE EXAMINATION PAPER

Professor Aird thought that the examination paper shared the disadvantages, but not all the advantages, of examinations in general. But he believed that the examination paper had a useful place in medical examinations. He considered that there was a correlation between success in the written examination and success in a subsequent surgical career. The examination paper was unquestionably, in its simplest form, a measure of a candidate's acquisition of facts. It was also a measure of a man's literacy, and if medical education was to remain on a university plane surely the qualifying examination must require a certain standard of literacy. The paper also required, or should require, the capacity to present facts and arguments in a logical and orderly way. But Professor Aird disliked the present use of the examination paper, as an additional test on the results of which a candidate, wavering in the balance on the clinical and practical examination, could be passed or failed. In his view, practical examinations in medicine were too short and hurried, and the examination paper might well be used as a sieve or filter to reduce the numbers of candidates presenting themselves in the practical examination, and so increase the amount of attention which their examiners could give them, as was the case in the M.R.C.P. examination.

Dr. MUNAWAR ALI, president-elect of the Pakistan Medical Association, thought that the aim of the examination paper should be neither to reveal the student's ignorance nor to test and tax his memory, as it seemed to do at present. If the papers were more widely planned, so that factual memory alone was not enough, the student would learn not only from what he was taught, but also from the study of his patients in the ward and the outpatient department. The question paper, if it was to serve as a true and searching test of the candidate's calibre, must be entirely reformed to fit in with the modern conception of medical education.

The present type of question should be replaced by ones which could be answered from a general knowledge of medicine gained by the student through his clinical observation, and not merely through cramming text-books. Problem questions and clinical case-records should be included, and there should not be more than three or, at the most, four questions in every three-hour paper.

Preventive and Social Medicine

Vice-president: Prof. A. STAMPAR

The news of the death of Prof. RENÉ SAND, vice-president of section D, was received during the opening session. Professor Stampar paid a tribute to Professor Sand, and members of the section stood for a minute in silence.

In his keynote address, Professor STAMPAR (Zagreb) drew attention to the relative neglect of social and preventive medicine in the undergraduate curriculum. In recent years, however, various bodies, such as the Rockefeller and Nuffield Foundations and the educational division of W.H.O., had done much to stimulate teaching in this field.

PRESENT STATUS OF TEACHING

Dr. H. PÉQUIGNOT (Paris) described social medicine as a new dimension of medicine which should be taught at the bedside throughout the clinical years. The training of specialists in preventive medicine, as in other branches, was easily done in the postgraduate years; what was more difficult and more important was to introduce the principles of social and preventive medicine to the whole profession by way of the undergraduate curriculum.

Prof. W. G. SMILLIE (Cornell) described the course at his university. In the fourth year the student worked in a comprehensive medical-care clinic in which the physician, the psychiatrist, the pædiatrician, and a member of the department of preventive medicine coöperated to give the student an integrated view of illness. During the same period the student acted as health adviser to a selected family.

Prof. J. H. TUNTLER (Groningen) forecast that more and more of the curative work would go to specialists and that if the G.P. were not to become extinct he would have to turn his attention to preventive work and to research.

Dr. E. GRZEGORZEWSKI (W.H.O.) thought that social medicine was the medicine of the future, and that its main task was to learn how best to apply medicine for the benefit of the community. Social medicine would receive contributions from the social sciences as clinical medicine receives support from clinical pathology.

Prof. THOMAS MCKEOWN (Birmingham) emphasised the importance of research to the development of social medicine. He thought that the conditions of medical practice had hitherto hindered research on large groups of clinical cases but that these obstacles might now be overcome. Prof. F. A. E. CREW (Edinburgh) said the student should be made aware of the doctor's rôle in the planned improvement of society. "The pharmacy of social medicine," he remarked, "was the House of Commons."

TEACHING OF INDIVIDUAL SUBJECTS

Discussing the teaching of epidemiology, Prof. THOMAS FRANCIS (Michigan) said the student should be taught to extend his concept of disease beyond the walls of the hospital. Teaching should include the demonstration of the aggregation of disease, such as poliomyelitis or streptococcal infection, within the household and community. Prof. ROBERT CRUICKSHANK (London) distinguished between the epidemiology taught by microbiologists, which he thought consisted mainly of applied bacteriology, and true epidemiology, which was the study of the pathogenesis of disease in the community.

In the discussion on demography and vital statistics, Prof. AXEL STRØM (Oslo) described the epidemiological exercises he arranged for his students. They consisted of epidemiological questions based on demographic data and vital statistics. Dr. PETER PAU (Trinidad) had found it impossible to interest his students in statistics, until he decided to introduce his course by discussing the laws of probability as applied to horse-racing and bridge. He also arranged for them to sell tickets at football matches, so that they should get to know something about crowds. Later on, they were able to go and help in the diagnosis and control of village epidemics.

Discussing the place of medical genetics in the curriculum, Dr. J. A. FRASER ROBERTS (London) thought that the small amount of instruction in genetics usually given in the biology course was insufficient for medical students, and that they should also receive a short course of didactic lectures, say five, which would be best given in the penultimate year. These lectures, in addition to dealing with known hereditary disease, should also tell the student something about the genetic aspects of blood-transfusion and they should help him to answer patients' questions on the probability of disease inheritance.

In the teaching of social psychiatry Dr. J. L. HALLIDAY (Glasgow) recommended the case-conference method in which the physician, the psychiatrist, and a member of the department of preventive medicine would participate. Dr. R. SUTHERLAND (U.K.) was experimenting with a tape-recorder for demonstrating to students the value of the psychosocial interview in ordinary medical cases.

Dr. J. M. FAULKNER (Boston) described the programme at Boston Memorial Hospital where students in their last year act as general practitioners for a month. Dr. JOHN PEMBERTON (Sheffield) suggested that with the extension of medical teaching to the home and health centre the basic medical sciences might need to be expanded to include some instruction in social science and normal psychology.

In a discussion on the teaching of occupational health, Dr. A. J. LANZA (New York) emphasised the need for better occupational histories in medical case-taking. He also thought that if occupational medicine were to advance rapidly, separate university departments should be set up. Other speakers, however, thought that in the interests of integration in the curriculum, occupational medicine should form a part of the work of the department of social and preventive medicine.

Dr. RICHARD SCHILLING (Manchester) thought there were two good reasons why students should be taught occupational medicine: firstly, to help the doctor to know better when and if his patient could return to his usual work; and secondly, because there was increasing evidence to show that the causes of some common Western diseases—e.g., bronchitis, peptic ulcer, and coronary thrombosis—were to some extent related to working conditions. Teaching health centres, he thought, might become focal centres for industrial health units for groups of small factories, and they could be used for teaching students industrial medicine.

"Good lecturers teach what isn't known and good students learn what isn't taught" was the aphorism with which Dr. H. M. SINCLAIR (Oxford) introduced the discussion on the teaching of nutrition. He said that the basic facts of nutrition should be included in the biochemical and physiological courses, the study of nutritional disease in the clinical course, and the social and economic aspects in preventive medicine. It was worth noting that in this country and the U.S.A. obesity was now the commonest disorder of nutrition. Dr. FULTON gave added point to the subject by remarking that the social application of nutritional knowledge had saved Great Britain from collapse during the late war.

Final Plenary Sessions

At the final plenary sessions the vice-presidents and rapporteurs, with the support of a few invited speakers, presented critical summaries of the work of their sections.

Requirements for Entry into Medical Schools

The section accepted unanimously Sir Richard Livingstone's ideal of the educated man—a man knowing the first rate in the humanities and the social and natural sciences, and continuously seeking it. Dr. Victor Johnson saw the task of undergraduate education as an attempt to catalyse a lifelong appetite for this knowledge, which could be continuously fed but never sated. The conference had discussed general and premedical education and the selection of students. Impressive pleas for a liberal training in the humanities, history, ethics, and æsthetics had been heard and applauded; but there was a strong feeling that science had an equal place as a cultural discipline which had not yet been recognised. At the same time, the arts graduate should be able to enter medicine.

It had been generally agreed that chemistry, physics, biology, and training in the scientific method were equally important in the premedical years; but members of the section, doubtless aware of their own deficiencies, had fought shy of mathematics. They had also felt that the social sciences were as yet too new to be given an established place in the curriculum. The history of medicine had had its advocates, but the majority felt that this was a mental luxury suited to those with an historical bent and likely to become a foible of veteran professors in search of a light occupation.

The selection of students had been discussed at length in the light of statistical assessments of the success of different methods. The importance of past performance and of school records was generally accepted, but there was more disagreement on the value of intelligence tests. There was no correlation between scoring in them and success in the medical career; at most they could eliminate grossly inadequate candidates. They still had their advocates and some believed that if they were devised by medical psychologists they would give reliable results. It was not surprising to learn that selection by interview had been roughly handled in this search for perfection; but an unexpected championship of the method came from the dean of Rochester University, New York. It was good, too, to hear more than one speaker affirming the need for progressive selection throughout the whole course of training.

Dr. Raymond Whitehead concluded a brilliant rapportage by saying that he thought we should be careful not to expect too much. Quoting Prof. Samson Wright's satirical description of the ideal medical student which had been published in *The Lancet*, he argued that many of the required attributes were really those of a Greek god. Students were merely ourselves when young, and he would like to commend to all those entrusted with their selection the advice of Maurice Chevalier: "At our age we must be reasonable." Certainly in this country medicine must compete with heavy claims upon manpower, and the quantity of applicants does not necessarily indicate their quality. Provided that the really unfit can be eliminated selection should not be too rigid and should allow for the power of a genuine sense of vocation to overcome considerable handicaps.

Aims and Content of the Curriculum

The conference had generally agreed that the object of the undergraduate curriculum was to produce the "basic" doctor, or what a speaker at a previous conference had called the totipotential cell of medicine—not a specialist, not even a general practitioner, but a man equipped with enough factual knowledge to enable him to practise safely, with a firm understanding of the basic processes of disease and their effects on bodily function and structure, a man, in fact, able to profit by further training in any branch of his subject.

The need to simplify and unify the curriculum was the main theme of the reports by Sir Arcot Mudaliar and Dr. Morgan Jones. The vast growth of medical knowledge and the fragmentation of medical practice by increasing specialisation had left medical students bewildered by factual detail and ignorant of principles. Something must be done to reduce the claims on their time by enthusiastic specialists. The real problem was to integrate the curriculum so that the premedical, preclinical, clinical, and preregistration periods fitted logically into one another. A number of cherished rights would have to go, and barriers which at present separated one kind of teacher from another would have to be removed. Understanding anatomists, physiologists, and chemists who were willing to compress their subjects into shorter periods, and to orientate them to one another and to medicine, had been welcomed. It followed that the teaching of these subjects would have to some extent to be continued in the clinical period and not jettisoned as soon as students entered the wards. Many helpful suggestions had been made: anatomy and physiology could be taught side by side, radiology could be used to demonstrate normal anatomy, while physiology could be used to explain signs and symptoms in terms of carefully selected examples of disease. A two-way system of give and take should bring the preclinical teacher and students to the hospital and at the same time keep clinicians firmly anchored to the basic sciences.

The timing of the various stages of the curriculum was all-important. The patient should be introduced as early as possible. In the clinical period a prolonged introductory year with teaching centred on the patient rather than his disease, and including visits to his home and to antenatal and similar clinics, would give a broad view of medicine. Later it might be possible to hold courses in which anatomy, physiology, pathology, diagnosis, and treatment could be demonstrated system by system. There would be risks in these courses unless the didactic and theoretical purpose was emphasised, and they should not become substitutes for clinical training. The specialties presented the greatest problem; it had been suggested that they should be taught to undergraduates by general physicians and surgeons only, but the conference was prepared to welcome any specialist teacher who would emphasise the part of his own subject in the general plan. Overriding all was the sense that time was precious, and the relief offered by the preregistration year was therefore welcomed. Above all, the student's time must not be too much occupied by teaching: some leisure must be left for learning.

Techniques and Methods of Teaching

Prof. Ian Aird and Prof. Hurtado felt that their section had had to polish the instruments of teaching, and not enter the starry firmament of educational thought; but in so doing they believed that they had kindled a modest light of their own. They had discussed teaching in the hospital, the dispensary, and the home.

Professor Aird discussed the place of some of the methods and techniques: the value of watching an operation, for instance, as a way of integrating anatomy with clinical work, and the use of outpatients for vocational training and even (a little fearfully) for learning the technique of rapid diagnosis. There had been general approval for the conference technique by which the student took an active part and where there was a philosophy of learning from past mistakes. Research projects might be valuable for students, but Professor Aird, endorsing Professor Hurtado's plea, favoured those which could be carried out with the simple apparatus which Sir Thomas Lewis used to give to his students.

Little was said of the qualifications of teachers, although Professor Moore emphasised the educational value of their association with students, particularly as a means of helping the less gifted. The issue between whole-time and part-time teachers had been vigorously debated. On the whole the conference was prepared to welcome both, provided that their teaching and practice were scientifically founded. In this country, at least since the start of the National Health Service, their functions as well as their economic status were very similar. The Citadel had lost a little of its gilt, the ivory tower was a little off-white.

Teaching of Social Medicine

From the applause which greeted Professor Stampar and Dr. Charles Fletcher it was easy to sense the very special interest of the conference in social medicine. Dr. Fletcher thought that the allocation of a whole section to the subject indicated not only awareness of its importance but a certain perplexity. Social medicine began a long time ago, but its proper recognition began between the two world wars. It still excited a certain amount of hostility, largely because its aims were not always precisely stated, and perhaps because it might involve political action. It was a branch of medicine concerned with the study of the influence of social factors on health and upon the ætiology of disease. Its aim was to promote health, to prevent disease, and to aid recovery. Social medicine required a knowledge of demography, of mortality and morbidity statistics, and of genetics, in addition to the subjects usually included under public health. These justified the claim that it should be taught to some extent by specialists familiar with its techniques and actively engaged in research. On the other hand, social medicine should be integrated at every stage with the study of the individual, and should be taught by all teachers as part of their own subject. Even specialists would do well to lecture with a stethoscope round their necks.

Conclusion

The success of the conference was abundantly proved by the number of those who arrived with undiminished enthusiasm for the final sessions. It was unlikely that much was said which was entirely new, and doubtless many teachers must have been pleased to learn that their established practice was abreast of the future. On the other hand it did disclose and stimulate further a sort of divine discontent which Prof. Melville Arnott would have as a perpetual attribute of anyone concerned with medical education. Indeed both consciously and subconsciously the conference seemed to sense the basic fault of present education, when it demanded that whatever was taught must be integrated with the whole and not just grafted on to it. The rapid growth of medical knowledge has overburdened undergraduate teaching, and there is an urgent need for analysis and dissection so that something better suited to his needs may emerge. The process is likely to need courageous action which will break down the rigid divisions between the various periods of the curriculum. Few subjects can be properly taught in watertight compartments or departments, and most need the resources of more than one for their proper exposition. This is not to deny the central place of the clinical discipline, which must persist as long as doctors have to care for the sick, but merely to plead for its enlargement by all available means. Examinations, too, must be more closely integrated with teaching if the relatively high rate of failures among these carefully selected students is to be reduced. A revolution in educational thought has already taken place, but energy and enthusiasm such as marked this conference are still needed to translate it into action.

The Widdicombe File

II. HOW TO GET THROUGH EXAMINATIONS

DEAR DAVID,

Your father tells me that you have been selected to play for the hospital in the cup final against Mary's. I am delighted to hear it. He is a little anxious lest football should interfere with your studies, but I have written to reassure him on that point. I have known both of you too long (and you are much more like he was as a young man than either of you realise) to have any fear that you will fail to make a first-class doctor; indeed the maintenance of a healthy body, and the cultivation of an understanding and love of your fellow men (the only psychology that is worth anything), which a place in a first-class XV gives you, will go far to make you one.

Medical examinations differ from others in that they are not designed to select supermen for a prize, but merely to ensure that those who become doctors have sufficient knowledge, skill, and experience to enable them to practise that high calling with benefit, or at any rate without detriment, to their patients. The papers and practical examinations are supposed to be conducted on a percentage basis, but actually they are marked to a standard. The candidate enters the room on each occasion a presumed pass, and as the minutes slip by he is rising above or sinking below that provisional estimate. All the time he is being judged as a potential doctor; on his knowledge, his judgment, his power of decision, his personality, the way he treats his patients, the way he treats the senior colleague who is examining him.

You can best prepare yourself for such an examination by using every opportunity to gain practical experience during your clinical period, by seeing all the patients you can, attending outpatients, ward-rounds, operations, and post mortems, by making your own observations, examinations, and decisions, and then checking them by the observations and decisions of more-experienced clinicians. All the time you should listen, ask questions, and argue. You should try to answer your own questions and solve your own puzzles, and ask for help only when you are stuck; never ask for information on a subject you have not yet thought about; and, when you do ask, commit the answer to memory. What you find out for yourself is your own knowledge, built for ever into your mental fibre; what you learn from teachers remains a veneer on the surface of your mind. You should consult books and go to lectures, but you should devote yourself especially to the basic sciences, anatomy, physiology, and pathology, which underlie the others. Having mastered these sciences and spent your hospital years in enthusiastic clinical study, you need not worry about the small amount of time you have been able to give to medical and surgical textbooks. You will know what they contain without opening them and can approach a new clinical problem with confidence.

Do not worry about last-minute cramming; if you have been trained at the bedside you will not need it. Take the last days easily. Take a holiday if you feel like it, and come to the examination physically fit and mentally alert. Wash your hands, brush your hair, put on a clean collar and a good suit, treat your examiners and patients with equal courtesy—in fact, look and behave like a doctor in the making.

Before you meet the examiners, you will meet the paper they have set. Perhaps you look on the written paper as the most alarming part of an examination. You need not do so, for it is the one part in which the tactics are your own. In the practicals you are asked questions and must give specific answers, which may be right or wrong; in the paper you are asked to give information on certain topics and you can make tolerably certain

that the information you give is right. The written question in medicine or surgery that can be answered in one way, and one way only, has not yet been invented. Each question can be treated in many different ways—the categorical, the didactic, the conversational. The anatomical, physiological, pathological, and clinical facts that may be assembled, the personal experience of cases that can be quoted, the views on ætiology that have been advanced by various authorities, the alternative methods of treatment that have been recommended, are far greater in the mass than could be put down in the time allowed for answering one question even by the most encyclopædic of registrars dictating to the most expert of shorthand prizewinners. You yourself already know, from your practical experience, quite apart from your reading, a great deal more than you could get down in the time. You should therefore, from this vast accumulation in your brain, select those facts and opinions which are the most pertinent and the most telling, and, having first made certain that they are 100% dyed-in-the-wool accurate, arrange them in the best possible manner as an answer that will satisfy a tired old man working late at night through a heap of illegible and not very intelligent papers.

No-one can write a good answer without sketching it out first, and a good answer is not necessarily a long answer. Clarity will beat verbosity every time. Scriptorial logorrhœa leads to bad handwriting, and pearls of wisdom may be wasted by illegibility.

First, get your facts down. You may have to answer four questions, and be given three hours to do it in. Half an hour is quite long enough for writing the best answer a candidate can write and an examiner can mark. You can therefore spare one hour for preliminary thought. Get four sheets of paper (in some examinations candidates are not allowed to use loose sheets of paper, but there are no regulations forbidding them to rough out pencil drafts on the reverse of the pages in the examination book, provided they rub them out before handing in the papers), and put the number of a question at the head of each. Write down on each in turn all the facts about that particular question that you can remember. Then, without racking your brain, go on to each of the others in turn. It is a well-known peculiarity of the human mind that it cannot by concentrated effort produce from its storehouse of memory facts that do not come to the surface easily, but, once the effort is relaxed, the same facts will immediately emerge unbidden. This is true, not alone of the retentive but also of the inventive functions of the mind, and therein lies the value of alternation between work and idleness. Newton hit upon the theory of gravitation because his giant brain had been engaged for years in wrestling with mathematical problems, but also because he was not driving it at the moment when the flash of inspiration came to him; he was lying on his back in the sun thinking of nothing but apples, so that the synapses in his association centres, which were having a good rest, suddenly made new contacts that they might never have made had they been clamped tight for the transmission of fresh cortical impulses. Even so in your mind, as you write down all you can remember on sheet 3 (the distribution of the median nerve in the hand), fact after fact will arise unbidden about question 1 (the investigation of a case of hæmaturia in a man of 45) or question 2 (how would you examine a patient brought in unconscious after a fall on the head?). These facts you will immediately add to the sheets lying beside you, and go on till all four contain all that you can remember on the four subjects. You must then go through them again, and cut out, quite ruthlessly, any statement of whose accuracy you are not absolutely certain. Very few examiners can spot an omission; none can fail to detect a mistake. If your facts are all accurate, and if they are arranged clearly, your answer will be a good one. Your last task, therefore, before actually writing the paper, is to rough out very briefly how you intend to answer each question.

There is no standard method of writing an answer. Tabulation is of very limited value. A good answer can be made clearer and briefer if it is well tabulated, but a bad one stands out in all its nakedness when a numbered list draws attention to the gap in the ranks. Tabulation is good when you are asked for a list of causes, symptoms, methods of treatment, or swellings in Scarpa's triangle (which you seldom are), and when the list you have to offer is a complete and accurate one. It is unsatisfactory when the tabulated headings are of very unequal importance; if one, for instance requires two lines and another two pages.

The best answer is almost necessarily arranged in three parts. First, you say what you are going to say, then you say it, then you say what you have said. Thus, of the half-hour you allow yourself for question 1, you would spend five minutes in an introduction outlining the likely causes of hæmaturia in a man of 45; you would then devote twenty minutes to describing your investigations, history, physical examination, laboratory tests, special investigations, and so on; you would keep the last five minutes for a brief summary of the important features of the problem you had discussed.

This, then, is my advice with regard to the paper. Assemble all the facts you know, cut out all those of which you are uncertain, present them consecutively, and write legibly. Never use a ball-point pen in an examination; it will write under water or in an aeroplane and it will write after a fashion for a year, but when used in a hurry it misses essential strokes in letters and makes good handwriting characterless and bad writing undecipherable.

When you go up for your clinicals, remember first that you are being judged as a man on your fitness to be a doctor, not merely as a student on your knowledge of medicine. Look your best and behave your best. A man who is ready to approach this important milestone in his career unshaven, with dirty fingernails, and boots unpolished, is not one to earn the goodwill of his colleagues or the respect of his patients. One who habitually uses slang in place of accepted phraseology will be unable to interrogate or advise those who expect their doctor to be a cultured man. One who bullies or hurts the patients he is asked to examine cannot help those who come to him in fear of death. You will meet two examiners; remember that they are anxious to pass you and not to plough you, to help you rather than to catch you out, and accord them the courtesy due to senior colleagues. You will meet a number of patients, ordinary men and women, many of whom have come a long way for a meagre remuneration in the belief that they are helping the cause of medical science; treat them as you would like to be treated yourself, as you would like a doctor to treat your wife or child.

Be prepared for all methods of examination. A torch, a stethoscope, a tape-measure, a skin pencil, and a knee-jerk hammer look good enough though you do not use them. When you are allotted a long case, go carefully into the history, and look at the patient as a whole, before you examine in detail the suspected systems. Remember that very often two or three lesions may be present; the discovery of others beside the main one will start you off on the right side of the pass line. In presenting the long case, cut out all irrelevant detail and come straight to the point of what is the matter.

When you are asked to examine a short case you will not be expected to inquire into the history. You will be given some such instruction as "Examine that lady's left breast; she noticed a small lump by accident three weeks ago," or "Tell me what you make of the lump in this man's neck." Before you do anything else, take a

good look at the patient; too often candidates rush straight at a case and cover up the key physical signs with their hands. The eye surveys relations and proportions as a whole, and sight can perceive finer departures from normal than touch. Look at the woman with the lump in her left breast; whether the breasts are symmetrical in size, shape, contour, level, colour, and skin texture, whether they retain their symmetry when she raises her arms above her head, whether the nipples are identical in level, prominence, and inclination; those points may be decisive in assessing the innocence or malignancy of the lump you discover with your hands. Look at the lump in the man's neck; its exact lie with regard to the larynx, the sternomastoid, or the submaxillary triangle, is easier to see than to feel. Look at inguinal swellings before you feel them; the presence of a small impulse on coughing, and the relation of the bulge to Poupart's ligament, can be determined by vision with greater certainty than by palpation.

In short cases, palpation is, after inspection, the only method of examination you will usually require, but do not forget to use percussion, auscultation, transillumination, and mensuration, if they seem appropriate. In palpation remember first to examine wide areas with the flat of the hand or with both hands, before investigating local lesions with one or two fingers. There is one candidate with a life membership of Queen Square who habitually approaches the patient with his left hand in his pocket and prods the lump with his right index finger as if he was pressing a bell that would give the diagnosis. Conduct the examination in a purposeful order, making each test once only, and do not hurt the patient. Remember that one lump may be the child of another; that a lump in the neck may have a primary tumour in the mouth; one in the abdomen, a primary in the testicle; or one in the axilla, a primary in the lung. Remember, too, that many chronic and non-fatal lesions which are seldom seen at hospital—Charcot's joints, injuries of peripheral nerves, exostoses, old congenital dislocations of the hip, and chronic nervous diseases, such as syringomyelia—constantly present themselves in the examination hall.

The examination in pathology is above all a test of common sense. You will be shown something in a bottle, something on a plate, a bone or a stone, and asked to identify the specimen. You will then be cross-questioned on your answer if you are wrong, or led into a discussion on ætiology or prognosis if you are right. Your discussion has two aspects; you must recognise the anatomical site of the specimen and the pathological nature of the lesion it is intended to illustrate. The recognition of one goes far to provide the answer to the other: thus if the specimen shows part of the vertebral column split longitudinally, it is almost certainly an example of fracture dislocation, Pott's disease, metastasis from carcinoma (probably of the breast or prostate), or spina bifida; if the tissue contains a large ulcer with everted edges, its site is probably the rectum, colon, stomach, tongue, or skin. The specimens that will be shown you have all been prepared and selected with the greatest care to ensure that there is sufficient normal tissue to make recognition of the site easy, and that the lesion is typical of the disease it exemplifies. If, after careful study of the specimen from all sides, above and below, you are still unable to recognise either its site or its nature, say so at once. Bluffing will lead you nowhere, but if you say right out "I am afraid I cannot identify the part of the body from which the specimen is taken," the examiner will either tell you, or indicate some feature in the specimen that will give you the clue. If the problem is difficult, and to puzzle a student of your standing it must be, you will gain, not lose by your frankness. Having established the organ or tissue, you should know what diseases are likely to affect it, or if you do not, you can refresh your mind by running through the well-known "surgical sieve" which includes all lesions: is it congenital, traumatic, degenerative, or a local manifestation of general disease; is it due to infection by a pyogenic organism or an animal parasite, or is it one of the granulomas; is it neoplastic, innocent, or malignant, epithelial or mesoblastic, primary or secondary? Such general outlines, coupled with your experience in the wards, operating-theatre, and post-mortem room, should enable you to come through your pathological viva voce with flying colours.

Well, David, the best of luck to you. I know you will get through, and I know you will make a good doctor. I often wish that you had come to my hospital, for I should dearly have loved to have had you as a dresser, and to look forward to working with you as my house-surgeon, then my registrar, and perhaps to seeing you take my place on the staff when I retire. But on the whole I agree with your choice. It is seldom wise for a student to work at the hospital where one of his near relatives is a member of the staff. I should have hated to think that, whenever you entered on a new appointment, your colleagues greeted you with the cry "Hello, Whiddon: you must be the nephew of Dangerous Dan."

My love to your father,

Ever your affectionate uncle,

DANIEL WHIDDON.

Special Articles

LECTURE NOTES

SOME EARLY RECORDS

LAURENCE DOPSON

"To acquire habits of note-taking is very valuable, and therefore I have less scruple in asking you to take notes of the early part of the course at any rate."

THIS was Lord Lister's advice in his first course of lectures as professor of surgery at Glasgow in the winter session of 1864. These lectures were taken down in shorthand and transcribed by a student, P. H. McKellar, who later became surgeon to St. Thomas's Hospital and chief surgeon to the Metropolitan Police.

In the days before textbooks were common, lecture notes were carefully preserved and bound into books. A number have survived in the medical libraries, and they are interesting not only for the light which they shed on contemoprary medical practice but also for what they show of the evolution of teaching methods and the ways of medical students.

SOME HISTORIC NOTEBOOKS

The lectures of the Hunters have naturally been treasured by those who heard them. One of the copies in the library of the Royal College of Surgeons of England occupies eight manuscript volumes, written in a beautiful copper-plate hand and with a hand-painted wash drawing of William Hunter for frontispiece. The lectures were taken down by William Jeremiah Alleron, who afterwards practised at Darlington. "Anatomy," the first lecture explains, "is the art of examining human bodies by Dissections, the advantages from it are very great, the principal of which is, that it teaches us a rational method of curing Diseases." Dr. Hunter concludes his lecture: "Lastly I shall give you my opinion thereon. Lectures on subjects intelligible in prints are but of little service."

In another set of the same lectures, taken by I. Goodwin, there are only seven lines on the first lecture; evidently this student was not interested in Hunter's historical and general remarks, but only in the practical information which he had to give. A manuscript notebook inscribed "J. Wade, West Milton, near Doncaster," in the library of the Royal College of Physicians of

London, also begins "Anatomy is the Art of examining Bodies by dissection," but there is a variation—probably because William Hunter changed his introduction from year to year—in Ray Beckwith's book in the same library:

"Anatomy is that Art by which we obtain a knowledge of the Structure and formation of the human Body. It properly denotes the dissection of animal bodies. . . ."

A further example in the Royal College of Surgeons library of the care formerly lavished on lecture notes is to be found in the title page of "M.S. Lectures on Surgery given gratuitously to the Pupils of St. George's Hospital by Everard Home Esqr. taken in the winter of 1800–9 by Whitlock Nicholl." Volume I includes a portrait of the student and a biographical sketch of him by Charles Hawkins. Nicholl was a surgeon in Glamorgan until he lost a hand in an accident; afterwards he practised as a physician at Ludlow. Probably it was no trouble for him to take full notes, for he wrote voluminously in after life, his works including "A Sermon on the Divinity of Christ" and "Hints on Improving the Conditions of the Poorer Classes."

Dr. Charles Witt, a student at St. Bartholomew's Hospital, wrote out in a large folio volume his notes of "Mr. Abernethy's Surgical Lectures delivered MDCCCXX–MDCCCXXI," which are now at the Royal College of Physicians. His brother, Dr. George Witt, seems to have hired out these notes; at any rate there is a long declaration at the end of the book in his handwriting which begins:

"We the undersigned who have been permitted to take a copy of the foregoing Lectures of the late Mr. Abernethy hereby promise and agree in the most unequivocal manner that we will never allow any person or persons to take a copy without our knowledge, but in all things we wish and express our determination that no copy shall ever be taken from ours without first obtaining the sanction of Dr. Witt, in testimony whereof we have hereunto subscribed our respective names . . ."

The signatures are witnessed. There are several bearing the date 1835, and one person had the book under these conditions in 1843.

SHORTHAND OR LONGHAND?

It is certainly possible to obtain a very full report of a lecture in longhand and that is probably how most of the lectures were recorded by medical students in the past. The Royal College of Obstetricians and Gynæcologists has in its possession the "Heads of a Course of Lectures on Midwifery delivered at Doctor Orm's Theatre by (the now) Doctor Lowther, in the Months of November and December, 1773," which according to the title page were "taken down in common Running-Hand by his Pupil T. Knolton." But it is also clear that many medical students not only knew shorthand but were sufficiently competent verbatim shorthand-writers to take down a whole lecture. At the Royal College of Surgeons are the Lectures in Surgery by Alexander Monro Secundus, Professor of Anatomy at Edinburgh University, "transcribed from the copy of his lectures taken down in short hand by Mr. Thorburn" in the year 1776 with additional observations delivered during the years 1781–84, by James Curry. The volumes of the lectures delivered by Dr. George Fordyce in the period 1785–87 at his house at Essex Street, Strand, include some of the actual shorthand notes of the student, Henry Rumsey, who became a surgeon at Chesham. Dr. Fordyce was physician to St. Thomas's Hospital: one of his lectures, the notes of which are in the library of the Royal College of Physicians, contains the remarkable statement: "The whole French Nation lies commonly in damp Sheets without any mischief arising." With the transcripts of Lister's lectures in 1864, there are some pages which show that Dr. McKellar wrote exquisitely tidy shorthand outlines.

THE LATER STYLE

How and when did the full transcription of lectures come to be replaced by notes as they are taken by the modern medical student? An account of William Hunter's spring course of lectures in anatomy in 1778, in the Royal College of Physicians, has an abbreviated text. For example:

"Recommended Diligence & pointed out the advantages that must follqw a diligent & regular Attendance."

The student of today, however, would not have bothered to note during the circulation of specimens:

"The preparations handed from Right to Left, backwards and upwards—desir'd not to keep them too long and to take care not to damage them."

In the Lister Collection in Lincoln's Inn Fields there are notes taken by Dr. Robert W. Forrest of Lister's lectures in the session 1863–64. "The notes are just as written in the Class Room with words and incomplete sentences filled in where required to make them more intelligible." By this date the modern note-form was coming in; and so was modern handwriting—in those days examiners must have been fairly tolerant in this matter. Prof. Thomas Watson's lecture notes taken when he was a student at Edinburgh in the 1870s are also preserved at the Royal College of Surgeons. The lecture on systematic surgery, delivered by Dr. John Chiene "5.xi.72," is recorded:

"*Inflammation.* Knowledge of it is *Keystone* to Surgical Science."

On fractures the note is:

"*Treatment.* Object to give patient as sound a limb as possible. Duty, to assist nature, so far as you can!"

Today the student is accustomed to lavish illustrations in his textbooks and to drawings on the blackboard; and he often illustrates his lecture notes. None of the transcripts of the students of the Hunters or any of the earlier accounts of lectures have diagrams. Dr. Forrest's notes of Lister's lectures in 1863, however, included sketches and the use of red crayon; and Professor Watson, eighty years ago, was living at a time when students had come to use diagrams and underlining, and when the visual approach was established. But the notes of the 18th and early 19th century were written out in indigestible paragraphs of great length, after the literary style of the period.

None of the three libraries I have mentioned contain examples of medical students' notes of, for example, the start of the 20th century, the years between the wars, and today. These would complete an interesting series showing the development of the technique of note-taking at medical lectures.

I wish to thank the Presidents and Librarians of the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Royal College of Obstetricians and Gynæcologists for their help.

". . . The complexity of human suffering demands that doctors be trained to deal with unhappiness and fear as well as with pain; with defensive shyness or reserve, as well as with the physical guarding of tense muscles over a tender spot. They need to learn that brusqueness can be as cruel as clumsy handling of damaged tissues, and that the relationship between doctor and patient demands as much forbearance, imagination, and unselfishness as that between parent and child. Yet they cannot be expected to gain this necessary wisdom from the precept or example, still all too prevalent, which leads them to regard the diagnosis of neurosis in patients complaining of physical symptoms as tantamount to the unmasking of an imposter—a process of scientific detection which may bring credit and satisfaction to the doctor, but which is chiefly valuable in relieving him of any further responsibility towards the patient so skilfully discredited."—*Observer*, Aug. 23, 1953; p. 4.

Students Guide

1953 1954

Medical Schools

At OXFORD UNIVERSITY the number of new entrants to read medicine is still restricted by decree, but has been increased: for the coming academic year the quota is to be 65 men and 11 women (compared with 55 and 10 last year). In addition to the course for the B.M., B.CH. degrees, medical students must also qualify for a B.A. degree: and most do this by taking the final honour school of animal physiology, which normally occupies them for one year after they have taken the 1st B.M. examination in organic chemistry, anatomy, and physiology. A few students take instead the final honour school of psychology, philosophy, and physiology. After taking the honour school, students do a course in general pathology and bacteriology and pharmacology, lasting two terms, before going on to their clinical studies. The clinical section of the school still limits its entry to 32 students a year so as to afford a high degree of individual tuition and opportunities for practical experience. About two-thirds of the clinical students are drawn from Oxford preclinical students; and the remainder come from other universities, normally to take the degree of their own university. At the present time the clinical students include men from Cambridge, Leeds, and London universities, and in addition scholars come regularly from the Dominions. By assembling such a mixture of students the University hopes to minimise any risk of parochialism among students who receive their complete medical training in Oxford. The Radcliffe Infirmary (491 beds) remains the main teaching hospital, but practical instruction is also given in other members of the United Oxford Hospitals group (1276 beds). For example, tuberculosis is taught at the Osler Pavilion, and infectious diseases at the Slade Hospital; and students spend two months in their final year at the Churchill Hospital doing general medicine and certain specialties. In addition the Wingfield-Morris Orthopædic Hospital is used for orthopædic training, and Littlemore Hospital for training in mental diseases. The small size of the student body ensures good opportunities for practical experience. In both medicine and surgery students spend half their time in a "firm" of 4 students, and half in a "firm" of 8 students. Instruction is given partly by the whole-time Nuffield professorial units of medicine, surgery, obstetrics and gynæcology, anæsthetics, orthopædic surgery, and plastic surgery, and partly by the consultant staff of the United Oxford Hospitals. For example, in general medicine all students spend three months with a consulting physician and three months with the professor of clinical medicine. In this way students are provided with a mixture of academic and vocational training. The Radcliffe Infirmary is an active centre of clinical research, and it is hoped that students will be stimulated by being taught in this environment. At the same time the large share in the teaching taken by the consultant staff ensures that the course is rich in practical instruction. Throughout the clinical course each student has a tutor who sees him regularly in the traditional Oxford way. The tutorial system is proving to be a valuable part of clinical education. The highly developed neuro-surgical unit, established by the late Sir Hugh Cairns, Nuffield professor of surgery, is not to be disturbed: agreement has now been reached between the University and the board of governors of the teaching hospital for a building plan which will provide a new surgical department with beds, laboratories, and offices for the next professor of surgery on the Radcliffe Infirmary site, without encroaching on the existing neurosurgical unit. It will also give the professor of clinical medicine a new department with 50 beds in a compact unit, which has long been needed.

At the UNIVERSITY OF CAMBRIDGE the number of candidates wishing to study medicine still greatly exceeds the number of places available (about 220 per annum), and all college entries are subject to a university quota. Most colleges will not admit candidates for the degrees of bachelor of medicine and surgery unless they have passed or secured exemption from three parts of the 1st M.B. before coming into residence. This policy allows the student every opportunity to obtain a good class in part I of the Natural Sciences Tripos, whilst those who have the ability and energy are able to take part II of the Tripos during the third year of residence. The first part of the final M.B. examination—the basic subjects of pathology, pharmacology, and therapeutics—may be taken two years and three months or more after beginning clinical studies. The clinical subjects—medicine, surgery, and midwifery and gynæcology—comprise the second part of the examination and may be taken after two years and nine months or more of clinical study. Before a candidate can be admitted to the final M.B. he must obtain honours in a tripos (or if overstanding for honours must reach the honours standard in part I of the Natural Sciences Tripos). In addition to obtaining honours in the Tripos he must also reach a qualifying standard in anatomy and physiology (or pass a qualifying examination in anatomy and physiology) and must also pass an examination in pharmacology. The two degrees M.B., B.CHIR., which are awarded together, are a registrable qualification. The medical student in Cambridge, after qualifying in anatomy and physiology, has excellent opportunities for preparing for clinical studies during the long vacation when he may attend courses in elementary clinical methods and in introductory psychology. In the course in clinical methods the teaching is concentrated on the simple technique of making a proper examination of patients attending the general and special departments of a hospital. Lectures on The Career of Medicine, The Social Background of Disease, Epidemiology, and The Practice of Medicine in the Home are included.

LONDON SCHOOLS

LONDON UNIVERSITY bears a different relation to its medical faculty from other universities: whereas they have one school of medicine each, London has twelve autonomous schools, each of which is closely linked with one of the teaching hospitals, as well as University, King's, and Queen Mary Colleges, all of which take medical students for some part of the preclinical course. All the medical schools are now open to men and women students. The introduction of the revised regulations for the preclinical period of the course of study for the M.B., B.S. degrees, which was originally planned for October, 1953, has been postponed for an indefinite period. The existing regulations for the first and second examinations for medical degrees will therefore continue in operation until further notice. The revised regulations provided for an integrated preclinical course of eight terms in a school of the university, covering chemistry, physics, biology, anatomy, physiology, biochemistry, and pharmacology. The course for the preclinical examination, part I, would extend over three terms, and the course for the preclinical examination, part II, over a further five terms. There would be no exemption from the preclinical examination, part I, on the ground of a general certificate of education or a higher school certificate.

UNIVERSITY COLLEGE provides courses of instruction in the preclinical subjects. The dean of the faculty of medical sciences is Prof. E. H. F. Baldwin.

KING'S COLLEGE expects to have each of the six faculties full again this autumn. Applications for admission to the medical faculty in 1954 have to be in by Oct. 31. The 1st M.B. course continues under the existing regulations, and is likely to do so for some time. The college

could adopt the revised regulations, under which some of the present 2nd M.B. subjects would be taught at the same time as the premedical subjects, only by cutting down the numbers admitted annually to the preclinical course from the present 120 to 60 at most. As a result of some reorganisations in the faculty, histology will in future be taught in the department of anatomy instead of in the physiology department. The medical faculty (and the college in general) suffered a severe loss last March by the death of Dr. J. A. Hewitt, who had been Adviser of Studies to medical students for several years and a very good friend to those in difficulties. His place has been taken by Dr. J. A. C. Knox, who is also a senior lecturer in the department of physiology.

The arrangements made by the joint committee of QUEEN MARY COLLEGE and the London Hospital Medical College ensure that the teaching in physics, chemistry, and biology fits in closely with preclinical teaching. Most of the available places are taken by London Hospital men and women, but applications from students with other hospitals in view are considered. During the 1952–53 session 84 first-medical and 1 premedical (Conjoint) students passed through the departments.

At UNIVERSITY COLLEGE HOSPITAL Medical School the past year has been one of steady performance with no dramatic changes to record in building, equipment, or educational procedure. It is perhaps worth mentioning that this year, for the first time in the history of this school, part I of the London final examination was held here as an internal examination. The new playing-field at Hendon is already being used for cricket and there are hopes that before very long a start will be made on the new pavilion which has already been designed and for which the money is available. Out-of-school activities other than "organised" games flourish here, and the devotees of rowing, sailing, athletics, choral singing, and acting have all been able to report satisfactory achievements during the past year.

At ST. BARTHOLOMEW'S HOSPITAL Medical College one of the more cheerful events during the past year has been the opening of the newly built College Hall. This stands in the college grounds off Charterhouse Square, and provides, besides dining-room, common-rooms, and recreation-room, study-bedrooms for one hundred students. The common-rooms and dining-room are of sufficient size to accommodate all the preclinical students who work in the college in Charterhouse Square. The rebuilding fortunately has not stopped with the College Hall; progress is well advanced with the first stage of the new science block to replace the war-shattered buildings of physiology, pharmacology, physics, and chemistry. Within a measurable time it should be possible to house in an adequate building the departments of physiology and pharmacology. Physics and chemistry will have to wait rather longer until the second stage of the building can be completed. Although it may not be compulsory for the school to ensure that every student passing a qualifying examination obtains a suitable internship to enable him to go on the provisional register, it is regarded as being something of a moral obligation. Steps are being taken to see that the delay in finding posts is cut to a minimum. Suitable students are encouraged to take an honours B.SC. course in the year after passing their examination in anatomy and physiology, before they start their clinical work. There is no difficulty with those to whom an internal scholarship can be offered for this purpose, but other suitable candidates who have grants from various education authorities are encountering some difficulties in having their grants prolonged for an additional period because they have had no internal scholarship awarded to them. The first clinical period, which is locally called the introductory course, is continually under review. In order to make it as practical as possible, a short period of actual nursing each day has been incorporated in this three months—an addition which on the whole has been enthusiastically received by the students. Another problem to which a complete solution has not yet been found is the time taken by travelling if students are to see any of the activities which cannot easily be demonstrated to them in a general hospital, such as tuberculosis work, child-health organisations, child-guidance clinics, and public-health arrangements in a typical borough.

The CHARING CROSS HOSPITAL Medical School has continued to make good progress during this past academic year. The course for the 1st M.B. examination has been held at the Northern Polytechnic and students are jointly members of the medical school and of the polytechnic. This has been a successful venture and 85% of those who took the course passed the 1st M.B. at the first attempt. The departments of anatomy, physiology, and pharmacology have continued to live up to their previous high reputation and 90% of those examined were successful. In the clinical period arrangements have been made for students to see the workings of domiciliary midwifery in the area of the medical school, and this scheme has enlarged their experience of an important side of medicine. A change in the University requirements for hygiene and forensic medicine has made it possible to reorientate the course to include social medicine and to bring it into line with modern developments in the preventive field. The experiment by which all final-year students live for a time with selected general practitioners has been continued and has proved very popular: the recent report by the College of General Practitioners shows that the students of this school receive the greatest amount of instruction in this important field, into which most of them will be entering as general practitioners of the future. During the year special efforts have been made to facilitate research and many important papers have been published; and new schemes of research are in process of completion.

ST. GEORGE'S HOSPITAL Medical School has for some time submitted to the handicap of cramped and inconvenient premises on the assumption that rebuilding was imminent. When it became obvious that no such project would be completed for at least a decade, the school, with the help of the University of London, embarked on a plan of reconstruction at Hyde Park Corner, of which the greater part has now been completed. The administrative offices and students' refectory and club were moved over a year ago to larger premises in Knightsbridge adjoining the school, while the old buildings were converted for the use of the department of pathology. The school now has an excellent new building of three storeys with adequate space to house the teaching and research of this department. Increased facilities for clinical teaching are still needed, but in view of the recent designation of another hospital, the situation should improve before long. In the meantime, by rigidly restricting the entry to 45 students a year, it is possible to maintain the St. George's tradition of personal instruction to small classes at the bedside. The societies of the school continue to flourish. Choral and dramatic activities are prominent, whilst the various athletic clubs are well patronised. Individual students have achieved considerable distinction in athletics and swimming and on the river.

At GUY'S HOSPITAL Medical School the two and a half years of preclinical studies are designed to prepare the student for the clinical work which will follow, and particularly for the eventual practice of medicine. There is a close link between the medical school departments and the wards. It was expected that from October, 1953, the new regulations of the University of London, whereby students would be admitted only for the full course of preclinical studies, would be adopted, but it has not been possible to implement this. Oxford and Cambridge students are admitted for the three clinical years. The aim at Guy's has always been to encourage responsibility from the moment the student enters the wards. A three-monthly series of dresserships and clerkships are arranged in the general wards and in special departments so that students accept supervised responsibility for patients, and the emphasis is on bedside and outpatient teaching rather than organised lectures. There are, however, lectures and demonstrations organised by the directors of the departments of surgery, medicine, obstetrics, pædiatrics, and anæsthetics in order to cover the whole

curriculum. Preregistration appointments are available for those newly qualified, and every encouragement is given to men of promise to obtain the higher degrees and diplomas. It is a condition of entry to the medical school that students should join the Clubs' Union which covers all athletic and intellectual activities and includes membership of the Students' Club.

KING'S COLLEGE HOSPITAL Medical School provides the clinical training for students reading for the degrees of London, Oxford, and Cambridge. The hospital serves a large residential area and has one of the busiest outpatient departments in London. The dental school provides full courses for dental degrees and diplomas. The preclinical subjects are taught in the faculty of medical science, King's College, London, where students are admitted either for the 1st M.B. or 2nd M.B. course. At the college, students have the advantage of a full college life and of associating with students of all faculties. The clinical curriculum is kept under constant review and in January this year some modifications were made in the clinical introductory course, to which great importance is attached. Upon the successful results of a pilot scheme, every student now has the opportunity of seeing at first hand something of the work of a general practitioner. It is hoped that more time may be allotted to this valuable experience when the scheme is fully established. Progress has been made in facilities for research. The Cowburn Research Fellowship has been established with a fund of about £35,000 which was left to the medical school by the late Arthur Douglas Cowburn, R.N.V.R., formerly H.M. Coroner in the southern district of the County of London, for the furtherance of research in pathology, bacteriology, morbid anatomy, and allied subjects. Regulations have been approved and the first Cowburn Fellowship is now being advertised. A suite of rooms in the hospital is being adapted to provide additional research accommodation, and research projects are assisted on the recommendation of the recently established King's College Hospital and Medical School Joint Research Committee. The larger part of the funds for research are provided by the hospital from its endowment funds; the medical school council has also made available for research certain of its trust funds. The medical school has made arrangements with the faculty of medicine of the University of Toronto for an exchange of medical staff. The first exchange will take place this summer when one of the King's registrars will leave for Toronto and King's will accommodate a doctor from Toronto, the holder of a Markle Scholarship. A new demonstratorship in morbid anatomy has been established with the object of providing experience in laboratory methods and research for intending clinicians. The hospital is fortunate in having 23 approved intern posts available every six months for its newly qualified students. No difficulty has been experienced in securing posts elsewhere for the few students who have not been appointed to preregistration posts within the teaching-hospital group. During the twelve months up to May of this year, 45 students gained qualifying degrees in medicine and dentistry in the Universities of London, Oxford, and Cambridge, including 2 with honours; and 47 students obtained the diplomas of the Conjoint Board. An additional amenity in the medical school is a new mixed common-room with a bar, which is open not only to men and women students but also to the medical staff. It is already an established success. This innovation was made possible by a gift of £750 from Major-General Sir Cuthbert Sprawson, C.I.E., F.R.C.P., a former student of the school, who qualified in 1898. Mr. St. J. D. Buxton retired after thirty years as orthopædic surgeon to the hospital and lecturer in orthopædics in the medical school. The medical school council have conferred upon Mr. Buxton, Mr. Everidge, Mr. Negus, and Mr. Palmer, all of whom have recently retired, the title of emeritus lecturer in the medical school in recognition of their long and loyal service. The council record with regret the death of Dr. J. A. Drake, consulting physician for diseases of the skin, a former dean of the medical school: and the sudden death in November of Dr. J. D. King, director of the Medical Research Council's Dental Research Unit in the medical school and a former student.

During the past year the number of applicants at the LONDON HOSPITAL Medical College has remained approximately the same, though it was expected that by now it would have shown some signs of reduction. As usual about half the students joining the college had obtained 1st M.B. exemption at school and the remainder had spent one year at Queen Mary College. Rather more students are leaving school with exemption from two parts of the 1st M.B., and they thus have to spend one year studying biology. This year has seen the introduction of the revised clinical curriculum, which is clearly resulting in a great improvement in the facilities for study in the major special departments of the hospital. The demand from postgraduate students for general teaching at the hospital continues to be high and the course in advanced medicine, held annually from January to March, is very well supported. The introduction of preregistration house-appointments has not so far produced any major difficulties, but it seems unfortunate that the General Medical Council have been unable to put newly qualified men on the Provisional Register until the university or college concerned has conferred their degree or officially met to issue the diploma. This has resulted in delay between qualification and starting work, with financial and other difficulties. In general, the most obvious difficulty in postgraduate training at present is that men are called up into the Armed Forces twelve months after qualification. The numbers of London Hospital graduates who have not in the recent past done two six-month house-appointments is very small and, therefore, preregistration does not make much difference to them, but the majority would welcome the opportunity of eighteen months of house-appointments, whether they will later go into practice or into a specialty. In the former case, most men favour appointments as house-physician and house-surgeon, followed by six months in a midwifery post with a view to taking the D.OBST. Those who have decided to specialise also require an uninterrupted eighteen months' work after qualification and it should be noted in this respect that the Royal College of Physicians, for example, will not allow a candidate to enter for the membership until he has been qualified eighteen months. It would be a great advantage in postgraduate training if the period of deferment from National Service could be extended from the present twelve months to eighteen months after qualification; and although no doubt there would be administrative difficulties in the transitional stages of the change, eventually the Forces themselves would benefit by having better-trained doctors.

AT ST. MARY'S HOSPITAL Medical School work has begun on the alteration of nine houses in Sussex Gardens which will provide residential accommodation for 80 students. The alterations should be completed by the middle of the session and, since almost half the students at the medical school live in lodgings, a hostel so near at hand will be greatly appreciated. It is hoped that work on a further nine houses to provide accommodation for 88 students will start as soon as the first part of the hostel is open, and this will mean that eventually the majority of students who at present live in lodgings will be accommodated in the hostel. Dr. K. W. Cross, senior lecturer in physiology, has been appointed reader in human physiology in succession to Dr. J. L. Malcolm, who will be taking up a post at the National Institute for Medical Research in October. Dr. A. d'A. Bellairs, lecturer in anatomy in the University of Cambridge, has also been appointed reader in anatomy, in place of Dr. J. J. Pritchard who is now professor of anatomy at Queen's University, Belfast. The course of lectures on preventive medicine has been revised and expanded and a number of visiting lecturers have been invited. Preparatory arrangements are being made to celebrate the centenary of the school in October, 1954.

At the MIDDLESEX HOSPITAL Medical School, now that the University of London's new regulations for the preclinical curriculum will not come into force either in

October, 1953, or in October, 1954, students will continue to be admitted to 1st M.B. classes or direct to 2nd M.B. classes, and also from Oxford and Cambridge direct to the clinical course. Candidates for admission to any stage of the course should apply eighteen months to two years in advance of the date at which entry is required; for the number of students seeking admission remains very high, and far in excess of the number of vacancies available. The teaching arrangements with the Central Middlesex Hospital and St. Anne's General Hospital continue, and clinical students have the advantage of being attached as clerks or dressers to the Central Middlesex Hospital for three months and of attending Harefield Hospital for instruction in pulmonary tuberculosis and St. Anne's Hospital for instruction in infectious diseases. There are, of course, a number of house-appointments available at the Middlesex Hospital for newly qualified students and many of these are now being held under the provisional registration scheme. This year, a small extension to the department of anatomy has been put in hand, and this will greatly improve the facilities for the teaching of histology. This new accommodation will be available before the beginning of the next session. The new Institute of Clinical Research and Experimental Medicine will be opening in October and this will afford facilities for research to members of the consultant staff which have never before been available.

At the ROYAL FREE HOSPITAL School of Medicine during the past session it has been possible to make a start on converting the rooms in the old buildings left empty when two departments were transferred to the new wing of the school. This work should be completed in the summer vacation. At the hospital a new clinical lecture-theatre has been erected with a seating capacity of 150, and the extension of the obstetrical and gynæcological department at Liverpool Road is now almost ready for occupation. The number of applicants for admission remains much greater than the places available, but it is now possible to admit a larger number of students into the first year. In common with other schools of the University, the school has had to cancel its plans for the introduction of a revised preclinical course in October, 1953, and it will therefore be possible to maintain a small entry into the second year. From October, 1953, the school will be admitting a group of students from the Royal Dental Hospital School of Dental Surgery for the preclinical course only. A scheme has been introduced this session by which clinical students in their final year may spend a fortnight with a general practitioner, attending surgeries and rounds, and learning something of the organisation of a practice. The school received during the year a legacy of some £50,000 from the late Dr. Annie McCall. The fund is being used to found the Annie McCall Postgraduate Fellowship in Midwifery, open to any woman graduate, and having a value of not less than £1000 a year, which may be held by one recipient for a period not exceeding three years. During the year 55 students gained qualifying degrees, including one with honours in medicine and one with honours in obstetrics and gynæcology. In athletics the school has again had a successful season, winning the inter-collegiate lacrosse tournament for women for the third year in succession and the inter-hospitals women's hockey shield for the fourth year. Both men's and women's cricket and tennis teams have had an active season, and an athletics club has been formed during the session. A light four from the rowing club won the junior four race in the inter-collegiate winter regatta, and two members of the club row in the University women's eight.

In 1947, after two disheartening and frustrating years, ST. THOMAS'S HOSPITAL Medical School was again reunited in London. The past six years have been a period of steady consolidation. Now a phase of reconstruction is looming over the horizon. Certain vital decisions have already been taken, of which the most important is that the school will be rebuilt on its splendid existing site beside the river. The programme of reconstruction will be spread over many years but there is sufficient room for adequate expansion of all departments. The applicants for entry appear to be unceasing, though there will be no increase in the number of those accepted; the number of beds remains a severe limiting factor. As the projected changes in the preclinical curriculum have been indefinitely postponed, both first-year and second-year candidates are considered. The Universities of Oxford and Cambridge continue to supply clinical students of a high standard. The advent of the National Health Service has achieved two things of major importance: firstly, the salaries and subsequent pensions of the whole-time teachers have reached reasonable levels; and secondly, teaching and research equipment has attained a far higher standard than was ever considered possible in pre-war days. A most generous grant from the Hospital Endowment Funds has made practicable many major research projects in which there is an ever-increasing liaison between clinical and preclinical teachers. This summer will see the completion of two new temporary lecture-theatres. They will ease the difficulties of previously insufficient teaching accommodation and make the holding of examinations less of a problem. The student population is full of activities outside its normal academic tasks. The Arts are heavily supported with the Christmas revue, the summer play, two choral society concerts, a large contribution to the Three Hospitals Orchestra, and various exhibitions and meetings. Every type of sport has many adherents. The women students are now qualifying with steady regularity and it is beginning to be difficult to picture the days when there were no women house-officers. Except for the more robust pastimes, there are hardly any societies and clubs in which the women students do not play a part.

As a year of house-appointments has been almost a routine in the past for those graduating in this school, the advent of the preregistration year makes little difference except that it is no longer possible to earn a little ready money between house-appointments by doing locums in general practice. This source of income has perhaps grown in importance recently owing to the high marriage-rate among senior students and newly qualified men. In all, the future promises well. There is great activity in every academic department and in other walks of life; and the calibre of the individual student remains high. Nothing is more stimulating than the prospect of reconstruction which will ease the major problem of adequate accommodation for staff and students alike.

The future of the WEST LONDON HOSPITAL Medical School remains uncertain. Negotiations have continued with the Postgraduate Medical School of London and with the Postgraduate Federation over possible schemes for collaboration, but nothing has yet been decided. A suggestion from the academic council of the Postgraduate Medical School proposed that the West London Hospital should by slow degrees become an accident and emergency hospital by converting beds to this purpose as members of the staff retire. This is a long-term scheme on which agreement has not yet been reached. No undergraduate students have been accepted for the full clinical course since October, 1948. General postgraduate instruction is given to students referred by the Postgraduate Federation and to some others who apply direct. There are also a number of senior undergraduate students from other schools who are doing revision work for their final examination. The main difficulty of an amalgamation with the Postgraduate School is that the two hospitals are too far apart, and it has been found by experiment, early in 1950, that it is impossible to teach students of one school effectively at two different hospitals. Although this is done in certain special hospitals, not unsuccessfully, it has been found that students do not like journeying from Hammersmith to the West London and prefer to do all their work in one place.

At WESTMINSTER MEDICAL SCHOOL the number of clinical students is 203, of whom 16 are women. 66 students are doing their preclinical studies at King's College, with a view to entering Westminster for the clinical period. Some 600 applications were received last year for an annual entry of 65. There are 430 beds at Westminster Hospital for clinical practice, allocated to general medicine, surgery, and obstetrics. The ortho-

pædic, ophthalmic, and ear, nose, and throat departments are also in the main hospital. Special instruction in pædiatrics is provided at the Westminster Children's Hospital, where there are over 100 beds. The scheme of occasional lectures to the firms in general medicine and surgery by distinguished visitors from other institutions has been continued with success. Students continue to visit the surgeries of general practitioners, and the Nelson Hospital, Wimbledon, is still used for midwifery teaching. Members of the general medicine firm, attached to St. Stephen's Hospital, Fulham, reside there in turn for part of the three-month period—a popular and useful innovation. 40 vacancies a year in the Westminster Hospital teaching group have been recommended for preregistration posts, and competition for these is keen. The students' clubs are very active: the rugby club reached the semi-finals of the Hospitals Cup for the second year in succession, and the music society has staged a number of successful concerts. The school has completed negotiations with Westminster Hospital for the leasing of land near Cobham, Surrey, for a sports ground. The various pitches are being prepared, and it is hoped that some at least will be in use early in 1954. Plans for a pavilion have been approved.

At the SCHOOL OF DENTAL SURGERY of the ROYAL DENTAL HOSPITAL of London, the curriculum for the first two years includes the study of general and special anatomy and physiology, dental mechanics, the properties of dental materials, and dental prosthetics. During the second two years, students attend lectures and clinics on general medicine and surgery at Charing Cross Hospital Medical School, and lectures and practice in dental surgery at the dental school. Degree students attend for a further period of four or six months' duration before completing their final examination.

OTHER ENGLISH SCHOOLS

At the UNIVERSITY OF DURHAM the number of applications for admission during the academic year beginning in October next has been approximately the same as for last year and competition for entry has therefore been quite keen. The majority of candidates apply for direct entry to the second-year course by qualifying for exemption from the 1st M.B. examination by virtue of passes in chemistry, physics, and biology at advanced level in the General Certificate of Education examination. Plans for the first stage of necessary extensions to the medical school have now been approved and building operations authorised. This extension of the present building will provide much needed additional accommodation for the department of physiology and for the teaching of pharmacology. Student activity has been as keen as ever. The annual meeting of the British Medical Students' Association was held in Newcastle last year and was very successful. The Durham Medical Students' Union have again arranged a student exchange scheme with the medical school at Oslo, and Durham will therefore be welcoming, once again, several students from Oslo during the summer vacation. The Durham Medical Rugby Football Club was again successful last season in winning, for the second successive year, the Senior Challenge Cup Competition held under the management of the Northumberland Rugby Union, thereby repeating the achievement of the club in 1922 and 1923.

In the UNIVERSITY OF BIRMINGHAM * the number of applications for admission to the medical school shows little sign of falling, but, generally speaking, the quality of the applicants is not as high as it used to be. An innovation, introduced during the past session, is that students, on admission to the second year (the first preclinical year), are given an intelligence test, conducted by Prof. E. A. Peel, professor of education. As a result, each student is given an intelligence quotient and, in the light of his subsequent performance, it may be possible to decide whether tests of this kind are likely to give a worth-while forecast of the student's aptitude for medicine. The tutorial system which was instituted last year, and by which members of the clinical staff of the hospital act as tutors for groups of 4 or 5 undergraduates during their years of hospital work, has made a good beginning. Another innovation, which was started a year ago, was the institution of a scheme, on a voluntary basis, whereby students in their final year were attached to a general practitioner for two weeks in order to familiarise them with the work of general practice. This scheme is regarded as an improvement on the formal teaching of the intricacies of general practice by a university department. The necessary arrangements to satisfy the requirements of the Medical Act of 1950 have worked smoothly, and all newly qualified graduates are in preregistration posts.

During the past year both the Vice-chancellor and the Vice-principal were medical graduates of this university. Dr. Humphrey Humphreys's term of office as Vice-chancellor came to an end with the close of the session; and his successor is Dr. Robert Aitken, who has relinquished the Vice-chancellorship of the University of Otago to come to Birmingham. Dr. Humphreys has done much to bring the long-proposed rehousing of the faculty of arts nearer realisation. The Vice-principal, Prof. A. P. Thomson, during his first year of office has sought the fullest possible working coöperation between the faculties of medicine and science. To this end, the first stage of the building of the clinical research unit on the Queen Elizabeth Hospital site is approaching completion and is expected to be opened before the end of the year. The new accommodation is to be allocated for research work to the clinical departments, but it is hoped, later, to establish a department of microbiology in the same building, which will house members of the faculty of science who are interested in that subject.

At the UNIVERSITY OF LIVERPOOL * the 1952 intake of medical students was approximately the same as in recent years—namely, 71 men and 23 women; of these 46 were admitted to the first year of study, and 48 to the second. The number of applicants seems to be increasing, but the main factor in this apparent increase is the growing tendency for each candidate to apply to several medical schools. A new clinical curriculum has come into force, the main features of which are: (1) the present Part III of the final M.B. examination will be discontinued, forensic medicine becoming a subject (with pathology and bacteriology) of part II, and public health becoming a subject of the final qualifying examination; and (2) systematic lectures during the first five clinical terms will be given only at 9 A.M., the students spending the rest of the day thereafter in the hospitals to which they have been assigned (previously they returned to the medical school for a 4 P.M. lecture). This year the University has celebrated the 50th anniversary of the granting of its charter in 1903. At that time Sir Rubert Boyce, Professor Henry Briggs, Sir Ronald Ross, and Sir Charles Sherrington were members of Senate. In earlier years Sir William Mitchell Banks in anatomy, Professor Richard Caton in physiology, and Sir Oliver Lodge in physics had served on the staff of University College, which had been established 21 years previously. Now a new medical school building is in course of construction. The first part, which will be ready for occupation towards the end of 1954, will house the departments of pharmacology and bacteriology. The framework of the new block consists of reinforced concrete columns and pre-stressed concrete floor beams—a technical development in construction used for the first time in this country. Another event of the past session which is worthy of note is that last summer the Privy Council authorised the creation of a separate faculty of veterinary science in place of the former school of veterinary science.

At MANCHESTER UNIVERSITY * the clinical sciences building in York Place is now complete and is occupied by the departments of pathology, medicine, social and preventive medicine, occupational health, otolaryngology, rheumatism research, and obstetrics and gynæcology. The space vacated in the medical school will ease

* The entrance requirements for the Universities of Manchester, Liverpool, Leeds, Sheffield, and Birmingham are laid down in the pamphlet, *University Entrance Requirements 1951-1955*, copies of which may be obtained from the Secretary to the Joint Matriculation Board, 315, Oxford Road, Manchester, 13. Additional faculty requirements may, however, be imposed; details can be obtained from the dean of the faculty of medicine in each university.

the problems of accommodation and extensive alterations are being carried out in the old building. The regulations governing parts II and III of the final M.B. examination have been modified in the light of experience. Candidates who present themselves in all four subjects of the final examination may in certain circumstances be allowed to pass in any two or three of these. The formal entrance requirement in mathematics has been discontinued, but applicants for admission to medical study should not underestimate the importance of appropriate preparation in mathematics. The discontinuance of the formal faculty requirement in mathematics enables intending applicants to get appropriate preparation in mathematics in the most convenient way on advice from their schools.

At the UNIVERSITY OF LEEDS * the past year saw the introduction of the new three-term 1st M.B. course. It is too early to say whether or not some modifications will be necessary. The 2nd M.B. course replanned, on a basis of five instead of six terms, will begin this October. A special subcommittee has been studying the clinical course and will be reporting shortly. It is hoped that it will be possible to carry out the detailed planning of the revised clinical course this coming session. Thanks to the coöperative attitude of the Leeds Regional Hospital Board and the hospital management committees in the area, the introduction of the preregistration year got off to a very satisfactory start. The school still has to face difficulties of accommodation as departments continue to expand. While these signs of vigorous life are welcome, they do present a problem which can only partially be solved by converting houses in the neighbourhood into research laboratories, a policy which the University is adopting wherever possible. While the number of applications for admission continue to exceed the number of places available, it is the general opinion of the selection committee that the selection of a sufficient number of really suitable candidates presents increasing difficulty.

The UNIVERSITY OF SHEFFIELD * suffered a severe loss in the past year by the death of Mr. J. E. Stacey, a distinguished clinical teacher of obstetrics and gynæcology. Prof. E. J. Wayne has resigned on his appointment to the regius chair of the practice of medicine in the University of Glasgow, and Prof. H. N. Green has left to become professor of experimental pathology in the University of Leeds. Of the changes made in ordinances and regulations, two are of major importance: pathology and bacteriology will each now form a separate part of the 3rd M.B. examination; and, when the degrees of M.B., CH.B. are awarded with honours, there will in future be no division into first class and second class. The University has accepted an offer from Boots Pure Drug Co., Ltd., to establish an annual prize in pharmacology in memory of the late Sir Jack Drummond, F.R.S. While no extensive new building can yet be reported, adaptation of existing premises has permitted considerable enlargement of the department of biochemistry; and, on the hospital side, the expected opening in the autumn of the Charles Clifford Dental Hospital will greatly increase the clinical facilities open to the dental school.

In the UNIVERSITY OF BRISTOL the past session has brought a number of small changes, both in facilities for undergraduates and in the courses of study. In the clinical part of the training the practical nursing has been repeated, again most successfully. Alterations at the Royal Infirmary include a new sitting-room and a reading-room for students; and plans for extensions to the department of medicine have been settled and work will start shortly. A voluntary scheme for final-year students to attend the practices of general practitioners has been established. The number of applicants for admission to the medical school shows a slight increase on last year. The veterinary school continues to attract a large number of applicants, and the first group of students to enter the school will be taking their final B.V.SC. examination at the end of the coming session. There have been some changes in the regulations for dental courses. Candidates for the diploma will in future be required to matriculate in the same way as degree students and will take the same examinations up to the final examination. The course for the B.D.S. degree will be six months longer than the L.D.S. course, with an additional part to the final examination. Medical students who passed the qualifying examination in June of this year are the first to be affected by the Medical Act of 1950. They have had no difficulty in finding posts, as the number of approved posts in the region considerably exceeds the number of students qualifying annually. Most of them have obtained posts in Bristol itself and only three, for personal reasons, have gone outside the south-west region.

WALES

In the WELSH NATIONAL SCHOOL OF MEDICINE the new regulations for the degrees of M.B., B.CH. are now affecting the medical school proper (which is directly concerned only with the clinical years of study). From April, 1953, the clinical courses began in that month instead of the following October, an arrangement made possible by the removal of the obligatory B.A. or B.SC. degree as a prerequisite to admission to the examinations for the M.B. It has been possible, therefore, to inaugurate a carefully designed introductory clinical course during the summer term, and all subsequent studies and examinations in the clinical years have been correspondingly modified. The consequent alterations of the time-tables have caused a good deal of labour and trouble. The University is in the process of amending the M.D. regulations with the object of laying more stress on a good class of thesis and less on a clinical examination, as well as providing for candidates whose experience and interests are mainly in other aspects of medicine than the purely clinical. From next October the professorship in obstetrics and gynæcology, which falls vacant on the retirement of Prof. G. I. Strachan, will become full-time, in long-deferred compliance with the original policy of the University. The list of approved hospitals in the Welsh Region required for posts under the terms of the Medical Act, 1950, has been completed. Its preparation has been facilitated by the cordial relations which exist between the school and the regional and teaching hospital boards and their officers. The available posts substantially exceed the numbers likely to qualify from the school in any year. After two years of continuous work, which the whole teaching staff has shared with officers of the hospital boards and the consulting architect, a report on the proposed new medical teaching centre has been completed and submitted to the Welsh Board of Health and the University Grants Committee. It runs to about 160 pages of foolscap and presents the proposals in much detail. As it is the intention to put the scheme out to architectural competition no plans have been prepared, but much of the report is in a form suitable for the schedules to be issued for such a competition. A feature of the scheme, if it is approved by the Ministry and the committee, will be the close integration of hospital and school premises.

SCOTLAND

At the UNIVERSITY OF ABERDEEN the course of study for the degrees of M.B., CH.B. extends over six academic years. The courses in the premedical and preclinical subjects are given in departments providing instruction to science as well as medical students located in Marischal College and in Old Aberdeen. The courses in the clinical years are given in the University buildings on the Foresterhill site where the main hospitals are, and clinical instruction is given in all the hospitals in Aberdeen. An innovation during the past year has been the arrangement made in association with the local division of the B.M.A. whereby a large proportion of general practitioners in the region have agreed to allow students to spend a month in their practices during vacation time. Students entering their final year have welcomed this arrangement, and many of them have already started work. The faculty is much interested in this scheme, which may be developed in the light of the experience gained this year.

At the UNIVERSITY OF EDINBURGH the past year has been as busy as ever. The number of applications for admission in 1953 to the course leading to the M.B., CH.B. degrees has continued to be high in relation to the number of places available. The degree course occupies six years and the stage has been reached where students commence in October next the final year of this curriculum. More places are now available in the school of dental surgery for the five-year course leading to the degree of B.D.S. With the institution of the degree in veterinary medicine and surgery (B.V.M.S.) and the incorporation of the Royal (Dick) Veterinary College within the University as the Royal (Dick) School of Veterinary Studies, the five-year course for this degree began in October last. First-year students for degrees in medicine, dentistry, and veterinary medicine and surgery attend the same first-year course which has now been revised to permit students to take the first professional examinations in two parts, one in March and one in June (instead of all four subjects in June as formerly). With effect from June 2, 1953, there will be a new requirement that two copies of theses for the degree of M.D. must be lodged. The University does not offer courses in preparation for higher degrees in medicine and surgery; but courses for the diplomas in public health, tropical medicine and hygiene, radiodiagnosis, and radiotherapy. The courses for the diplomas in medical radiodiagnosis and medical radiotherapy now occupy a full-time period of two years' study. The University also offers a three-year course leading to a certificate in medical illustration.

At GLASGOW UNIVERSITY, the last full year of students who followed the former five-year curriculum have qualified this summer and there will be only a small number of medical graduates from this school until July, 1955, when the first year of students pursuing the six-year curriculum will have completed their course and be due to graduate. Within the teaching establishment, no new senior posts have been created, but retirement under the age-limit is this year producing more than the usual number of changes in senior teaching personnel. The junior teaching staff has been augmented by a number of additions in the lecturer grade to the establishments of several individual departments. There have been no changes of major importance during the year in the arrangement of the curriculum, but some minor reorganisation of classes in the specialties has been undertaken with a view to spreading this instruction over a longer span of the whole clinical period. The main development in the faculty of medicine during the year has concerned the veterinary school. Both teaching and technical staff have been increased and rapid progress has been made with the new animal hospital and ancillary buildings for clinical veterinary instruction. These buildings, though still not completed, are in partial use and are already providing the veterinary school with greatly improved facilities for clinical teaching and investigation. The first year of veterinary students to complete their University curriculum will graduate in July, 1954.

At the UNIVERSITY OF ST. ANDREWS instruction in the subjects of the clinical years of study is given at Dundee, while the premedical and preclinical subjects can be studied either at St. Andrews or at Dundee. The annual intake of students to the faculty of medicine is limited to between 70 and 80 entrants, to ensure that the hospital facilities available are sufficient to allow of adequate clinical instruction being given to each undergraduate, as advised by the Goodenough Committee. In 1948 the six-year curriculum recommended by the General Medical Council was introduced. The necessary rearrangement of work in the years of study has now been made. Departments of social medicine and of child health are now in the charge of professors and the clinical side of the school has been greatly strengthened by their appointment. At St. Andrews and Dundee there are excellent student residences which accommodate undergraduates from all the faculties, and medical students in their early years are encouraged to reside in these so that there are broad contacts among the undergraduates which are of great educational value. There is also the William Low Residence for Medical Students, situated near the principal teaching hospital and devoted exclusively to undergraduates in their clinical years of study.

IRELAND

In the UNIVERSITY OF DUBLIN one of the principal events of the past year was the opening of the Moyne Institute of Preventive Medicine by Lady Normanby on May 7. This handsome building, the generous gift of Lady Normanby in memory of her father, the late Lord Moyne, will house the departments of bacteriology and social medicine. The former, which is under the direction of Prof. F. S. Stewart, has much more spacious accommodation than was possible in its previous premises, including provision for the teaching of bacteriology, both to medical and science students, and for a full programme of research. The school of social medicine is a new departure. It will be under the direction of Prof. W. J. E. Jessop, formerly professor of physiology in the Royal College of Surgeons in Ireland, who is interested in the application of physiological knowledge to clinical problems and particularly in the field of nutrition. The department will undertake both undergraduate and postgraduate teaching and research. The undergraduate course will include hygiene, in its widest sense, public-health administration, and industrial medicine. The principal focus of postgraduate teaching would naturally be a course for the diploma in public health. Although this college was the first to have such a course in Great Britain or Ireland, it was discontinued about 10 years ago. The question of reviving it is being considered. The number of applicants for admission is still very much in excess of the number of places available in the medical school, and all the places allotted to overseas students have now been filled.

The SCHOOLS OF SURGERY, DUBLIN, including Carmichael and Ledwich Schools, are attached by charter to the Royal College of Surgeons in Ireland. The college admits to the preregistration classes approximately 100 students each year. The normal method of entrance is by competition in the preliminary examination, but a limited number of places is given to those with exceptional qualifications and to certain students selected by the Colonial Office to which all colonial students should apply because, owing to limitation of numbers, they cannot be admitted to the entrance examination. Nearly all students take the Irish Conjoint Board's examination but some take in addition the London examinations. The Schools were inspected by delegates from London University five years ago and as a result were "recognised" for a period of five years: the recognition is therefore due for revision this year. Students are medically examined at the start of the preregistration year and again before the start of the clinical years. Two doctors give free medical care to students and there are a Men's Warden and a Lady Dean of Residence to help students in obtaining suitable accommodation and in other ways. The playing fields of 16 acres and the pavilions are among the best in Dublin. During the past year the laboratory space for chemistry and physics has been doubled, two rooms for advanced work have been added to the anatomy department, and much additional apparatus obtained for the pathology department. In addition a large room has been constructed for the Men's Union.

At the QUEEN'S UNIVERSITY OF BELFAST the number of entries each year is restricted to 108, of which up to 20 places are allocated to the school of dentistry. Applications for admission far outnumber the places available, and priority is given to children of persons normally resident in Northern Ireland, to children of graduates of Queen's University, and to ex-Service applicants. A few places are reserved for applicants from the Crown Colonies, but all such applicants must be sponsored by the Colonial Office. When priority places have been allotted any which remain (usually not more than 5 or 6) are allocated to selected applicants from Great Britain and overseas. The requirements for admission are: (1) matriculation in 5 subjects, of which English, mathematics, and a modern language are compulsory; (2) a qualifying examination in Latin; and (3) the pre-

medical examination in chemistry and physics. Details of the requirements and of examinations recognised for exemption may be obtained from the secretary, Faculty of Medicine, 25, University Square, Belfast, Northern Ireland. External examinations and courses of study for the 1st M.B. are not recognised for exemption from the course and examination for the 1st M.B. in Queen's University, but the University may accept, for not more than two academic years of the required total, approved courses of study pursued in any other university or school of medicine or school of dentistry. The staff has been increased by establishment of two readerships, one in medical statistics and one in the school of dentistry, and by two lectureships, one in operative dental surgery and one in dental surgery and pathology. The teaching staff now consists of 15 professors, 9 readers, 46 lecturers and special lecturers, tutors, registrars, and assistant lecturers. The student health department plays an increasing part in the life of the University. A staff nurse has been appointed to assist in the students' health clinic, to inspect and keep a list of lodgings, and, in particular, to look after the welfare of overseas students. Students entering the University are required to apply for an examination by the medical officer and to submit to an annual X-ray examination of the chest. The new Institute of Clinical Science is approaching completion and will be occupied during the coming session. It will add greatly to the facilities for teaching and research.

The NATIONAL UNIVERSITY OF IRELAND has colleges in Dublin, Cork, and Galway.

The faculty of UNIVERSITY COLLEGE, DUBLIN, is reorganising the curriculum so as to reduce the burden of detail in the final year in the hope that young graduates will be acquainted with medicine, surgery, and midwifery without being unduly confused. The difficulties which press upon the medical student are becoming every day more apparent. An understanding of a variety of scientific disciplines, in which even the expert cannot claim clarity, is demanded of the student, whose project must in the end consist of a routine execution of a limited range of standard techniques. He is urged by a zeal approaching salesmanship to master manœuvres which he is unlikely ever to put into use. And yet if he is not to be merely a directed technician, he must understand much and be able to do many things. It is hoped that the revised curriculum will help to overcome these difficulties. The postgraduate course for the diploma of mental diseases has been reorganised in order to achieve a wider and more extended range of practical experience.

Degrees and Diplomas

EXAMINING BOARDS

English, Scottish, and Irish Conjoint Boards

THE Examining Board in England by the Royal College of Physicians of London and the Royal College of Surgeons of England examines candidates for the qualifying diplomas of L.R.C.P., M.R.C.S. Candidates satisfying the board's regulations in regard to the preliminary examination in general education are eligible for admission to the premedical examination in chemistry, physics, and biology, and are required to complete the professional curriculum subsequently at a recognised medical school. Copies of the regulations, with a calendar showing the dates of examinations, may be obtained, free of charge, from the secretary to the Examining Board in England, the Examination Hall, Queen Square, London, W.C.1.

The Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow have an arrangement by which, after one series of examinations, held in Edinburgh or Glasgow, or both, the student may obtain the diplomas—designated by the letters L.R.C.P.E., L.R.C.S.E., L.R.F.P.S.—of all three bodies. Candidates may work for the examination of the Scottish Conjoint Board at any of the recognised medical schools of Great Britain and Ireland. The course lasts six years and includes, in addition to the preliminary examination in the natural sciences—i.e., chemistry, physics, and biology—three professional examinations: the first in anatomy and embryology, physiology, biochemistry, and biophysics; the second in pathology and bacteriology and pharmacology; and the final in medicine, surgery, midwifery, forensic medicine, and public health. Details may be had from the registrar, 18, Nicolson Street, Edinburgh.

The Conjoint Board of the Royal College of Physicians of Ireland and the Royal College of Surgeons in Ireland examines candidates for the qualifying diplomas of the L.R.C.P.I. and L.M., L.R.C.S.I. and L.M. After passing an approved examination in general education candidates are required to do a one-year course in chemistry, physics, and biology, these subjects being treated with special reference to their applications in medicine. After passing the preregistration examination in these subjects a five-term course of anatomy and physiology follows. There is then a preclinical term with an introductory course at the hospital and this is followed by three years' clinical work. There are three professional examinations. Candidates are accepted from most of the recognised schools at home and abroad, but in practice 99% of the candidates are from the Schools of Surgery which are controlled by the Royal College of Surgeons in Ireland with the coöperation of the Royal College of Physicians of Ireland. The Irish Conjoint Board thus differs from the English and Scottish Board in that it has a large teaching school under its control.

Apothecaries' Licences

The Society of Apothecaries of London grants the L.M.S.S.A. Lond. to candidates who pass the primary examination (which is held quarterly) and the final examination. Final examinations are held monthly, except in September. The minimum period of study is normally five years. The four parts of the final examination may be taken together or in any order. Regulations and a schedule of the required courses of study may be obtained from the registrar, Apothecaries' Hall, Black Friars Lane, E.C.4.

The Apothecaries' Hall of Ireland grants the diploma L.A.H. Dubl. to students who have passed the three professional examinations. Intending candidates must furnish evidence of having attended an approved course in practical and theoretical pharmacy. The diploma confers on holders the right of registration on the Medical Registers of Ireland and Great Britain. Examinations are held three times yearly, in March, June, and November. Further information may be had from the registrar, 95, Merrion Square, Dublin.

UNIVERSITY DEGREES

Bachelor of Medicine and Surgery

All the universities in the United Kingdom, except Nottingham, Reading, and Southampton offer baccalaureate degrees in medicine and surgery, conferred on the results of examination.

HIGHER QUALIFICATIONS

Those who have graduated in medicine and surgery are at liberty to seek higher qualifications if they wish.

Doctor of Medicine and Master of Surgery

Graduates holding a bachelor's degrees can take the degree of doctor of medicine or master of surgery. All universities with medical faculties in Great Britain and Ireland confer such degrees. London University offers the M.D. in general medicine, and in pathology, psychological medicine, midwifery and diseases of women, hygiene, and tropical medicine; the M.S. is obtainable in general surgery, and in dental surgery, ophthalmology, and laryngology, otology, and rhinology. At the University of Durham the degree of doctor of surgery (D.CH.) is offered in addition to the degree of master of surgery (M.S.). Liverpool offers the orthopædic degree of M.CH. ORTH.

Master of Midwifery

The Society of Apothecaries of London grants the mastery of midwifery (M.M.S.A.) upon examination in obstetrics, pædiatrics, and public health. The examina-

tions are held in May and November, and regulations may be obtained from the registrar, Apothecaries' Hall, Black Friars Lane, E.C.4.

MEMBERSHIP AND FELLOWSHIP

The Royal College of Physicians of London confers the membership (M.R.C.P.), which is obtained by examination. Examinations are held four times in each year, and medical graduates and licentiates of the college over twenty-three years of age may sit for it. Details can be obtained from the Secretary, Royal College of Physicians, Pall Mall East, London, S.W.1. Fellows of the college are elected annually at a general meeting of the college.

The Royal College of Surgeons of England grants a fellowship to those passing the primary and final F.R.C.S. examinations. The primary examination is open to those who hold a qualification registrable in the British Medical Register and to graduates in medicine and surgery of universities and medical colleges recognised by the council. Subjects of the primary examination are anatomy (including normal histology), applied physiology, and the principles of pathology. The final examination can be taken in general surgery, ophthalmology, or otolaryngology. To be admitted to the final examination in general surgery candidates must produce evidence of having been engaged in acquiring professional knowledge for not less than three years after taking a recognised medical qualification, and of having held the requisite resident surgical posts during a part of that time. Candidates for the final examination in ophthalmology or otolaryngology must have been qualified for three years and must have held general and specialist resident posts during an aggregate period of eighteen months. The primary examination is held in January and July; and the final examination is held in May and November. The college also grants a fellowship in dental surgery. The primary examination is open to those with a dental qualification registrable in the British Dentists Register, and to graduates and diplomates in dental surgery of universities and licensing bodies recognised by the council. Subjects of the primary examination are applied anatomy, and applied physiology, and the principles of pathology, with special reference to the teeth and jaws; and of the final examination surgery, oral pathology, and bacteriology and dental surgery. The Faculty of Anæsthetists has been formed within the college, and the faculty grants a fellowship by examination. Subjects for the primary examination are anatomy, physiology, pathology, and pharmacology; and for the final, anæsthesia and analgesia, medicine and surgery, and the application of the basic sciences to anæsthetics. Copies of the regulations and full particulars may be obtained from the examinations secretary, Examination Hall, Queen Square, London, W.C.1.

Medical graduates who desire to specialise in obstetrics and gynæcology may apply for entry to the membership examination of the Royal College of Obstetricians and Gynæcologists (M.R.C.O.G.). A minimum of three years' residence in hospital posts recognised for the examination is required before application is made. The fellowship (F.R.C.O.G.) is granted to members who are judged by the council to have advanced the science and art of obstetrics and gynæcology.

Graduates may become members of the Royal College of Physicians of Edinburgh (M.R.C.P.E.) on passing an examination, particulars of which may be obtained from the secretary, 9, Queen Street, Edinburgh, 2. The fellows are selected from among the members by the council of the college, and receive the designation F.R.C.P.E.

Fellowship of the Royal College of Surgeons of Edinburgh (F.R.C.S.E.) is granted to medical graduates who pass the required examinations. The examination is divided into two parts—the first on anatomy, physiology, pathology, and bacteriology, and the second on the principles and practice of surgery and on one of four special subjects to be chosen by the candidate. Particulars of the regulations may be obtained from the clerk of the college, Surgeons' Hall, 18, Nicolson Street, Edinburgh.

The Royal Faculty of Physicians and Surgeons of Glasgow grants, after examination, a fellowship *qua* physician and a fellowship *qua* surgeon registrable by the G.M.C. as an additional qualification (F.R.F.P.S.). Admission is by examination and subsequent election. Candidates for the fellowship in medicine must have been in possession of a recognised medical qualification for not less than three years, and must have been engaged during one of these years in full-time clinical work in a recognised hospital and have spent two other post-graduate years in approved medical work. The examination comprises a clinical examination in medicine, written and oral examinations in the principles of medicine and medical pathology, and written and oral examinations in the practice of medicine and therapeutics. Candidates for admission to the fellowship in surgery are required to possess a recognised medical qualification and to pass a primary and a final examination. The primary examination consists of written and oral examinations in anatomy and in physiology, pathology, and bacteriology. Candidates who have passed the primary fellowship examination of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons of England, the Royal College of Surgeons in Ireland, or the Royal Australasian College of Surgeons will be exempted from the primary examination for the fellowship of the faculty *qua* surgeon. For admission to the final examination candidates must have been in possession of a recognised medical qualification for not less than three years and produce evidence that they have been engaged, after qualifying, for one year in full-time clinical work in a hospital approved by the council and for a further two years in the study of surgery. The final examination comprises a clinical examination in surgery, written and oral examinations in surgical anatomy and surgical pathology, and written and oral examinations in surgery. Alternatively, candidates may submit themselves for examination in one of the following subjects: obstetrics and gynæcology, ophthalmology, or otorhinolaryngology. Details may be had from the secretary of the Royal Faculty of Physicians and Surgeons, 242, St. Vincent Street, Glasgow, C.2.

Membership of the Royal College of Physicians of Ireland (M.R.C.P.I.) is granted on the result of an examination, the details of which may be obtained from the registrar of the college, 6, Kildare Street, Dublin. Fellows are elected by ballot from among the members, and receive the designation F.R.C.P.I.

Graduates seeking the fellowship of the Royal College of Surgeons in Ireland (F.R.C.S.I.) must pass in two examinations, a primary in anatomy, physiology, and the principles of pathology, and a final in surgery. Exemption from the primary is given to candidates who have passed this examination since 1951 at either of the Royal Colleges of London, Edinburgh, or Australasia, or at the Royal Faculty of Glasgow. A full-time four-month course in preparation for the primary examination begins on Oct. 1 and March 1 each year: the number of places is limited. Further particulars may be obtained from the registrar, the Royal College of Surgeons in Ireland, Dublin.

The Faculty of Radiologists offers a fellowship (F.F.R.) to medical graduates of five years' standing who have spent at least one year in general clinical work at approved hospitals, hold a radiological diploma, and have practised radiology exclusively for at least two years after obtaining that diploma. Candidates are required to pass an examination in radiodiagnosis or radiotherapy, and in general medicine, general surgery, and pathology. Candidates who hold higher medical or surgical qualifications may be exempted from the examinations in general medicine, general surgery, or pathology. Full particulars may be obtained from the warden, the Faculty of Radiologists, 45, Lincoln's Inn Fields, London, W.C.2.

SPECIAL DEGREES AND DIPLOMAS

The regulations for the following diplomas can be obtained by applying to the examining bodies concerned.

Anæsthetics

The English and Irish Conjoint Boards offer diplomas in anæsthetics (D.A.). The Faculty of Anæsthetists grants a fellowship (F.F.A.) on examination.

Bacteriology

Diplomas in bacteriology are granted by the Universities of London and Manchester.

Child Health

Diplomas in child health (D.C.H.) are granted by the National University of Ireland and the English and Irish Conjoint Boards.

Clinical Pathology

The University of London offers a diploma in clinical pathology (D.C.P.).

Industrial Medicine

The University of Edinburgh, the Royal Faculty of Physicians and Surgeons of Glasgow, the Society of Apothecaries of London, and the English Conjoint Board offer diplomas in industrial health (D.I.H.).

Laryngology and Otology

The English Conjoint Board offers a diploma (D.L.O.) for those who have made a special study of the ear, nose, pharynx, and larynx. The final examination for the F.R.C.S. and for the F.R.F.P.S. may be taken in otolaryngology.

Microbiology

The University of Sheffield awards a diploma in this subject after a full-time course of study extending over one university session. Entrants will normally be expected to be graduates of a university, but the senate may deem other qualifications as equivalent for this purpose.

Obstetrics and Gynæcology

The Royal College of Obstetricians and Gynæcologists grants by examination a diploma (D.OBST.) to graduates with postgraduate hospital experience in general medicine or surgery and in obstetrics. The University of Dublin also offers a diploma (D.G.O.). The higher qualification granted by the Society of Apothecaries of London has already been mentioned. The final examination for the F.R.F.P.S. may be taken in obstetrics and gynæcology.

Ophthalmology

The English and Irish Conjoint Boards issue a diploma in ophthalmology (D.O. and D.O.M.S. respectively). The final examination for the F.R.C.S. and for the F.R.F.P.S. may be taken in ophthalmology.

Orthopædics

Liverpool University offers the degree of M.CH. ORTH. which is open to medical graduates of an approved university and to graduates other than medical who hold the fellowship in surgery of one of the British colleges or of the American College of Surgeons.

Pathology

The English Conjoint Board offers a diploma in pathology (D.PATH.).

Physical Medicine

The English Conjoint Board offers a diploma in physical medicine (D.PHYS.MED.).

Psychological Medicine

The Universities of London, Belfast, Bristol, Dublin, Durham, Edinburgh, Ireland (National University), Leeds, and Manchester, and the English and Irish Conjoint Boards offer diplomas in psychological medicine.

Public Health

A diploma in public health (D.P.H.) is granted by the English Conjoint Board and by all the universities of Great Britain except Cambridge, Oxford, Reading, Sheffield, Nottingham, and Southampton.

Radiology

The Faculty of Radiology grants a fellowship (F.F.R.). The Universities of London and Edinburgh and the English Conjoint Board offer two diplomas—one in medical radiodiagnosis (D.M.R.-D.) and one in medical radiotherapy (D.M.R.-T.). Liverpool University offers a diploma D.M.R.(D.) or (T.) obtainable by examination after a two-year course on diagnosis or therapy: after a further two years diplomates may be awarded the M.RAD. by presentation of a thesis.

Tropical Medicine

A diploma in tropical medicine and hygiene (D.T.M. & H.) is granted by the University of Edinburgh, by Liverpool University jointly with the Liverpool School of Tropical Medicine, and by the English Conjoint Board. The University of London has an academic postgraduate certificate and an academic postgraduate diploma in tropical medicine and hygiene.

Tuberculous Diseases

A diploma in tuberculous diseases (T.D.D.) is granted by the University of Wales.

DENTAL DEGREES AND DIPLOMAS

There are schools of dentistry at the Universities of London, Belfast, Birmingham, Bristol, Dublin, Durham, Edinburgh, Glasgow, Leeds, Liverpool, Manchester, Sheffield, and St. Andrews; and at the University Colleges of Dublin and Cork in the National University of Ireland. London University offers a B.D.S., an M.D.S., and an M.S. in dental surgery; it also prepares students for the L.D.S. of the Royal College of Surgeons. This college has a fellowship in dental surgery (F.D.S.). A fellowship is also granted by the Royal College of Surgeons of Edinburgh. Edinburgh University offers a B.D.S. and an M.D.S., Leeds grants an L.D.S., a baccalaureate degree (B.CH.D.), and mastership (M.CH.D.), and Manchester grants an L.D.S., a B.D.S., an M.D.S., and also a doctorate in dental science (D.D.S.). Glasgow University and the University Colleges of Dublin and Cork grant a B.D.S. and an M.D.S., and Trinity College, Dublin, offers a B.DENT.SC. and an M.DENT.SC. St. Andrews no longer offers a diploma, but in its place a baccalaureate (B.D.S.), and it has also instituted a doctorate of dental science (D.D.SC.). It continues to offer a diploma in public dentistry (D.P.D.) and an M.D.S. All the other universities mentioned offer L.D.S., B.D.S., and M.D.S. Licences in dentistry are granted by the Royal College of Surgeons of Edinburgh, the Royal Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Surgeons in Ireland. The Royal Faculty of Physicians and Surgeons confers a higher diploma in dental surgery (H.D.D.) and a diploma in orthodontics (D.D.O.).

Postgraduate Education

EACH university in the United Kingdom with a medical school is responsible for the postgraduate education of the region in which it is situated. Each has a postgraduate education committee with a dean or director of postgraduate studies as its executive officer.

IN LONDON

THE three Royal Colleges and the British Postgraduate Medical Federation coöperate, through a joint board, in providing postgraduate education in the medical and dental specialties in London, supplementing the provisions at the undergraduate medical schools and teaching hospitals. Each of the three Royal Colleges arranges courses of lectures in the clinical aspects of their specialties, and provides expert advice and guidance on suitable hospital appointments and programmes of study for candidates for its higher qualifications, and the services of the staff of the central office of the Federation are available to all postgraduates, including those from the Commonwealth and Empire and foreign countries. The Federation is arranging a fourth series of advanced lectures, entitled "The Scientific Basis of Medicine," to be delivered two afternoons a week, at 5.30 P.M. at the London School of Hygiene and Tropical Medicine, during the autumn and winter terms of the 1953–54 session. The lectures are designed especially for research-workers and specialists in training and will be open to all registered medical practitioners without fee. Further details are given in the advertisement columns of this issue.

British Postgraduate Medical Federation

The British Postgraduate Medical Federation, which is a school of the University of London, comprises the Postgraduate Medical School at Hammersmith Hospital (with its university departments of general medicine, general surgery, and pathology) and institutes in the following clinical branches of medicine and surgery associated with the special postgraduate teaching hospitals: psychiatry, laryngology and otology, ophthalmo-

logy, child health, obstetrics and gynæcology, neurology, orthopædics, dental surgery, cancer research, diseases of the chest, cardiology, dermatology, urology, and basic medical sciences (associated with the Royal College of Surgeons of England). These institutes are in various stages of development, and the numbers of students that can be admitted to the clinical practice of some of the hospitals are limited. Resident clinical appointments are available in the teaching hospitals to suitable students of the institutes, and provide the most valuable form of postgraduate education. There are opportunities for research by selected graduates. At all the institutes courses of instruction are given throughout the academic year; they are suitable for graduates in the early stages of their specialist education and also for those who have completed their practical training. Two or more years of hospital work in general medicine and general surgery after graduation are normally advisable before commencing work in the special branches. The work at the institutes is of an advanced type and is sufficiently comprehensive to enable graduates with suitable practical experience to prepare for higher degrees and diplomas. Emphasis is placed on clinical and laboratory teaching, supplemented by lectures and demonstrations. The Federation awards annually a number of travelling fellowships to graduates working in medical or dental schools or hospitals of the University of London, for the purpose of studying abroad. In addition short courses and other forms of continuing education for general practitioners are arranged at hospitals throughout the four Metropolitan regions, with the assistance of the regional advisers in postgraduate medical education.

It is essential for prospective postgraduate students from abroad to make their arrangements well in advance. Those sponsored by their universities, governments, or other official bodies receive first consideration in the allotment of vacancies. Established specialists from overseas, here for a short time, who wish to see something of the practice of this country, are always welcome; they are regarded as visiting colleagues, and the experts in their specialties are always ready to receive them and let them accompany them in their work and teaching. The director of the Federation is Prof. Sir Francis Fraser, M.D., F.R.C.P., and the central administrative office is at 2, Gordon Square, W.C.1. An information bureau of postgraduate activities in London and other university centres is maintained.

The POSTGRADUATE MEDICAL SCHOOL OF LONDON is associated with the Hammersmith Hospital, Ducane Road, W.12. It has university departments in medicine, surgery, and pathology. The teaching in the clinical departments, based on ward work, is continuous and is supplemented by lectures during three ten-week terms starting in January, April, and October. A course for the University diploma in clinical pathology, lasting one year, is available for a limited number of selected students. The department of radiology of the hospital provides courses for the diplomas in medical radiology of the Conjoint Board. All these courses begin in October. Long-term and short-term tuition in anæsthetics is provided for a small number of students.

The INSTITUTE OF PSYCHIATRY is associated with the Bethlem Royal Hospital and the Maudsley Hospital, Denmark Hill, S.E.5. Training normally covers two or three years, after experience elsewhere in general medicine, and is based on responsible hospital duties under supervision. Regular series of lectures and demonstrations are given throughout each of the university terms; clinical training continues throughout the year and includes seminars and case discussions. Students who, because of previous experience, do not wish to take the comprehensive two-year course are able to attend limited series of lectures and clinical instruction. A course in the technique and clinical application of electro-encephalography is held jointly with the Institute of Neurology two or three times a year. There are facilities for original investigations under supervision in the clinical departments and in the psychological, neuro-anatomical, electrophysiological, and biochemical departments.

The INSTITUTE OF LARYNGOLOGY AND OTOLOGY is associated with the Royal National Throat, Nose and Ear Hospital at Gray's Inn Road, W.C.1, and Golden Square, W.1. A comprehensive full-time course lasting eight months is held twice a year commencing in February and September; the first three months are devoted to a study of the basic sciences of the specialty, and the following five months are concerned with the clinical aspect of the subject. A part-time advanced revision course lasting ten or twelve weeks, suitable for students preparing for the higher qualifications, is held twice yearly, commencing in February and August.

The INSTITUTE OF OPHTHALMOLOGY (Judd Street, W.C.1) is associated with the Moorfields, Westminster and Central Eye Hospital. In addition to teaching by means of attendance on the hospital practice, a routine lecture and tutorial course, normally covering two terms of approximately eighteen weeks each, is held twice a year commencing in March and October; the first part of the course is devoted to anatomy, embryology, histology, physiology, optics, and elementary clinical instruction, and the second part comprises bacteriology, pathology, operative surgery, medical ophthalmology, and all aspects of ophthalmic disease. Part-time revision courses in the basic sciences are held from time to time. Clinical teaching and lectures are given at a higher level for advanced students. There are facilities for research for suitably qualified candidates.

The INSTITUTE OF CHILD HEALTH is associated with the Hospital for Sick Children, Great Ormond Street, W.C.1, and the Postgraduate Medical School at Hammersmith Hospital; the Queen Elizabeth Hospital for Children, Hackney, also participates in the clinical teaching of the institute. The institute provides tuition throughout the year in three terms of three months each, commencing in January, April, and October, and in addition a series of lectures by specialists and experts in various spheres is given each term.

The INSTITUTE OF OBSTETRICS AND GYNÆCOLOGY is associated with the Queen Charlotte's Maternity Hospital, W.6, the Chelsea Hospital for Women, Dovehouse Street, S.W.3, and the Department of Obstetrics and Gynæcology at the Postgraduate Medical School. The teaching is based on ward work and is supplemented by lectures and demonstrations during two terms of three months' duration which commence in March and September. Short intensive courses of a fortnight's duration, held in June and December each year, are suitable for students preparing for the higher qualifications.

The INSTITUTE OF NEUROLOGY is associated with the National Hospital, Queen Square, W.C.1, and the Maida Vale Hospital for Nervous Diseases, W.9, which jointly form a teaching hospital. The teaching is mainly by attendance on the hospital practice, supplemented by lectures and demonstrations. Two whole-time courses in clinical neurology are held annually commencing in January and October. Clinical instruction in neurosurgery is given throughout the year. Courses of clinical demonstrations (two weekly) are held several times a year. A course in the technique and clinical application of electro-encephalography is held jointly with the Institute of Psychiatry two or three times a year. Advanced students are appointed as clinical clerks in the wards or attached to the special departments and research laboratories.

The INSTITUTE OF ORTHOPÆDICS is associated with the Royal National Orthopædic Hospital, Great Portland Street, W.1. A complete training in orthopædics to selected graduates who have already been trained in general surgery and the basic sciences is afforded by means of clinical appointments covering a period of two or three years, with opportunities for research. For graduates requiring a less extensive period of education in the specialty, and especially for those who have acquired practical experience overseas or elsewhere, a series of advanced courses is held each year beginning in October. These are of seven to ten days' duration. Twice a year, in April and September, a short revision course of a week's duration in advanced clinical orthopædics is held. Both the central hospital in Great Portland Street and the country hospital at Stanmore are attended by postgraduate students.

The INSTITUTE OF DENTAL SURGERY is associated with the Eastman Dental Hospital, Gray's Inn Road, W.C.1. The object

of the institute is to train dental practitioners in the special branches of preventive and therapeutic dentistry, both for children and adults, by means of clinical experience, lectures, demonstrations, and research. Opportunities for limited numbers of students are available in orthodontics, conservative dentistry, periodontia, preventive dentistry, prosthetics, and oral surgery. For candidates preparing for the F.D.S. of the Royal College of Surgeons there is a six-month course which covers all aspects of dentistry, beginning in January and July. For selected students junior staff appointments are available for this period. In May and October there are revision courses, lasting eight weeks, suitable for candidates for the final F.D.S. examination. A course in orthodontics, of six months' or a year's duration, commences in October.

The INSTITUTE OF CANCER RESEARCH (ROYAL CANCER HOSPITAL) comprises the Chester Beatty Research Institute and parts of the departments of physics and radiotherapy at the Royal Cancer Hospital. The institute is concerned with all aspects of research into the causation and treatment of cancer, with the training of research-workers in this field, and with advanced teaching in biophysics and radiotherapy. Postgraduate lectures and courses of instruction are held in biophysics for students studying for the M.SC. degree in biophysics, and for students studying for a diploma in medical radiotherapy. These begin in October.

Facilities are afforded to those wishing to pursue research in the clinical and pathological aspects of cancer. Facilities are also available for research into the physical and biological foundations of medical radiology. There are laboratories for chemical, biochemical, and histological investigations into cancer and allied diseases.

The INSTITUTE OF DISEASES OF THE CHEST is associated with the Hospitals for Diseases of the Chest (Brompton Hospital, S.W.3, and the London Chest Hospital, E.2). Students may enrol for one term or more on an approximately half-time course, and arrangements are made for students who intend to specialise in diseases of the chest to attend a whole-time comprehensive course during the two terms beginning in October and January. During the summer term there is a full-time advanced revision course. Courses consist of clinical work in wards and outpatient departments, lectures, and demonstrations. A small number of students with adequate experience can be accepted for training in thoracic surgery. Part-time instruction in radiology of the chest for trainee radiologists only is given each term. There are three terms annually, commencing in January, April, and October.

The INSTITUTE OF CARDIOLOGY is associated with the National Heart Hospital, Westmoreland Street, W.1. Six appointments of the registrar type are offered each year to physicians in training as cardiologists who already have a sound grounding in general medicine. General physicians may enrol for full-time or part-time instruction for one term of approximately three months. There are three terms annually, commencing in January, April, and September. Three intensive courses of lectures and demonstrations, each lasting a fortnight, are held in February, June, and November.

The INSTITUTE of DERMATOLOGY is associated with St. John's Hospital for Diseases of the Skin, Lisle Street, W.C.2. Throughout the year clinical teaching takes place in the outpatient department twice daily, and ward instruction is given in the inpatient unit at the Eastern Hospital. There are also facilities for study and tuition in pathology, including mycology, radiotherapy, physiotherapy, and clinical photography. A short course of lectures is given in the summer months, and a longer and more systematic course in the winter. In addition, courses of clinical demonstrations are given for candidates for higher diplomas and degrees. A discussion on cases of special interest, to which students attending the courses are invited, takes place once a week.

The INSTITUTE OF UROLOGY is associated with St. Peter's, St. Paul's, and St. Philip's Hospitals. Comprehensive instruction is given in the wards, outpatient departments, operating-theatres, laboratories, &c., throughout the year. An advanced intensive course of one to two weeks' duration, is held in June. Weekend courses of demonstrations and lectures are held in January, April, and October, for higher examination candidates. Courses of lectures and demonstrations of clinical and laboratory material are held from time to time in coöperation with members of the Medical Society for the Study of Venereal Diseases; each course lasts two months. During these courses the practice of the venereal department of the hospitals is open to students, and the institute's library and reading-room is also available. In the winter months a series of lecture-discussions on urological subjects of interest to the whole profession are held on Wednesday evenings at 4.30 Limited numbers of clinical assistants are appointed from time to time to individual surgeons for personal tuition.

The INSTITUTE OF BASIC MEDICAL SCIENCES comprises the departments of anatomy, physiology, pathology, and pharmacology of the Royal College of Surgeons of England. The institute coöperates with other specialist institutes of the Federation in providing facilities for practical work and instruction in the basic medical sciences. There are opportunities for research for selected graduates. Full-time or part-time courses of three months' duration, suitable for candidates for higher degrees and diplomas, begin in April and October. A two-month revision course for primary F.D.S. candidates is held twice a year, beginning in January and July.

ROYAL COLLEGES, HOSPITALS, SCHOOLS, &c.

The ROYAL COLLEGE OF PHYSICIANS OF LONDON holds a series of advanced postgraduate lectures, including some on pathology, biochemistry, &c. The lecturers are drawn from the provinces as well as London. The audience is limited to 200. Details can be obtained from the secretary of the college, Pall Mall East, London, S.W.1.

The ROYAL COLLEGE OF SURGEONS OF ENGLAND has arranged a number of lectures and demonstrations to be held at the college. In surgery two series, each of 24 lectures, will be given during October and April, and at the same time clinical conferences will be arranged at selected hospitals. In anæsthesia two series, each of 40 lectures and clinical conferences, will be given in October and March. Courses extending over a period of from one to two years are arranged. Lectures and clinical demonstrations in oral, dental, and general surgery will be held in conjunction with the Institute of Dental Surgery in November and March. Lectures and courses are arranged during the year jointly with the Institutes of Laryngology and Otology, Urology, and Ophthalmology. Specialists are available for consultation on postgraduate training in general surgery, dental surgery, plastic surgery, and anæsthetics. Facilities are now available for advice on postgraduate orthopædic training through the postgraduate orthopædic committee which has its headquarters at the college. Residental accommodation is available in the college. The Institute of Basic Medical Sciences, formed jointly by the college and the British Postgraduate Medical Federation, has arranged a programme of postgraduate teaching in the basic medical sciences (see above). Information on all these courses may be had from Mr. W. F. Davis, deputy secretary, Royal College of Surgeons, Lincoln's Inn Fields, London, W.C.2.

The ROYAL COLLEGE OF SURGEONS IN IRELAND, commencing in October, 1953, will give a four-month course in anatomy, physiology, and pathology in preparation for the primary fellowship examinations. There will be two courses in each year, one starting in October for the February examination and the other in March for the July examination. These courses will be full-time, and it is hoped to make them fully comprehensive. Details of the courses may be had from the registrar of the college.

At ST. MARK'S HOSPITAL, City Road, London, E.C.1, surgeons wishing to specialise in proctology may attend a six-month course, and postgraduate students working for higher degrees may come for one to four weeks' whole-time study. Intensive courses, each lasting two weeks, are held in conjunction with the Fellowship of Postgraduate Medicine three or four times a year.

The LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE offers a number of courses, each of which lasts for one academic year of nine months. The course for the University of London's academic postgraduate certificate and diploma in public health, commencing on Sept. 28, 1953, is designed primarily for qualified medical practitioners who intend to engage in any branch of preventive medicine. The examination for the certificate is taken at the end of the first three months. During the final part of the course students may elect to make a special study of one of the following: (1) industrial health; (2) medical statistics and epidemiology; (3) institutional administration; (4) tropical hygiene; or (5) local government. The elective course in industrial health is recognised in part as qualifying for the examination for the diploma in industrial health. The course for the University of London's academic postgraduate diploma in bacteriology, commencing on Oct. 5, 1953, is intended to give advanced instruction to graduates in medicine, science (including veterinary science), or pharmacy who intend to follow a career in bacteriology. There are now no vacancies on the 1953–54 course. Applications for the subsequent session must be received not later than March, 1954. The number of places is strictly limited. For the University of London's academic postgraduate certificate and diploma in tropical medicine and hygiene, the course for which begins on Sept. 28, 1953, candidates who have obtained the diploma of the Conjoint Board are exempted from the University certificate course and examination provided they have attended the full five-month course for the Conjoint diploma at the school. Candidates for the final course, who must have had at least twelve months' experience of the practice of medicine in a tropical country, are required to specialise in one of the following subjects at the final part of the course: clinical tropical medicine; medical biology in relation to tropical medicine; or tropical hygiene. The course for the Conjoint Board's diploma in tropical medicine and hygiene is a continuous one lasting five months, and is held twice a year. The next courses begin on Sept. 28, 1953, and Feb. 22, 1954. Both the Conjoint and the University tropical medicine courses have been improved by the greatly increased facilities at the new Hospital for Tropical Diseases building at St. Pancras. A course in statistical methods and their application in medicine and a course in medical statistics and epidemiology will begin in March, 1954, and last for approximately four months. On each course lectures and practical demonstrations will be given twice weekly and the courses are so arranged that they can be taken in conjunction.

The ROYAL INSTITUTE OF PUBLIC HEALTH AND HYGIENE offers courses for the examination of the Conjoint Board of the Royal College of Physicians of London and of the Royal College of Surgeons of England for the certificate in public health, starting annually in March and October. This leads to the courses for both the diploma in public health (in January and August) and the diploma in industrial health (in February and July). Candidates wishing to proceed to the D.I.H. course of instruction are, by the examination regulations of the Conjoint Board, required to produce evidence of having a recognised certificate in public health. Students are also prepared for the examination for the diploma in industrial health of the Society of Apothecaries of London. Any of the courses may be taken whole-time or part-time. The next course for the certificate in public health will begin on Oct. 2, 1953. Further information may be obtained from the secretary, 28, Portland Place, London, W.1.

The TAVISTOCK CLINIC is an outpatient centre devoted to psychotherapy of both adults and children on broadly psycho-analytical lines. Special attention is at present being given to developments in group therapy. In addition, the clinic and the associated Tavistock Institute of Human Relations are engaged in research in the fields of personality, preventive psychiatry, and social medicine. A number of registrar and senior registrar posts are established in the adult and children's departments. The following courses of training are available: (1) a one-year full-time course in child psychiatry (for registrars); (2) a two-year part-time course in elementary psychotherapy (open to selected trainee psychiatrists); (3) a three-year course in child psychotherapy (for non-medical graduates); (4) a nine-month full-time course for graduate psychologists intending to work as educational psychologists; (5) a two-year full-time course in clinical psychology (for internal students); (6) several courses in the Rorschach method of personality assessment; (7) a one-year full-time course for advanced social case-work; (8) a one-year part-time course in psychogenic speech disorders (for speech therapists); (9) courses for general practitioners dealing with the patient-doctor relationship and the psychological factors in ill health. Both sides of the clinic also conduct regular case-conferences and other types of instruction open to a limited number of senior professional workers, on request. Further information from the training secretary, 2, Beaumont Street, London, W.1.

The TAVISTOCK INSTITUTE OF HUMAN RELATIONS is concerned with applied social research in problems which may cover the family, the factory, the hospital, or the community. Further information may be obtained from the secretary, 2, Beaumont Street, London, W.1.

The INSTITUTE OF PSYCHO-ANALYSIS, 63, New Cavendish Street, London, W.1, provides training in psychoanalytic theory and technique. The course is part-time and lasts about four years. It includes a personal analysis, attendance at lectures and seminars (held in the evenings), and clinical work done under supervision. Students are required to obtain general psychiatric experience at other clinics and hospitals, since the institute does not set out to teach all aspects of psychiatry. Completion of the course to the satisfaction of the training committee qualifies the student for election as an associate member of the British Psycho-Analytical Society. In addition to this main course designed for those intending to specialise, the institute gives briefer courses from time to time on the application of the principles of psycho-analysis to medical problems. These are advertised in the medical press.

The NORTH LONDON POSTGRADUATE MEDICAL INSTITUTE holds courses in advanced medicine, advanced surgery, and obstetrics and gynæcology; and instruction is given in pathology, anæsthetics, and radiodiagnosis. Clinical instruction is given at Bearsted Memorial Hospital, Chase Farm Hospital, North Middlesex Hospital, the Prince of Wales's General Hospital, and St. Ann's General Hospital. During the coming academic year there will be eight-week courses in advanced medicine suitable for those taking the M.R.C.P. examination, eight-week courses in advanced surgery suitable for those taking the F.R.C.S. examination, and two-week courses for those taking the D.OBST. examination. Further information can be obtained on application to the dean, Dr. J. Browning Alexander, the Prince of Wales's General Hospital, London, N.15.

The FELLOWSHIP OF POSTGRADUATE MEDICINE was founded in 1918. The Fellowship, whose offices are now at 60, Portland Place, London, W.1, provides a bureau of general information on postgraduate work, and also arranges various courses of instruction to suit the special needs of postgraduates whose requirements are not met by other existing programmes. The Fellowship's arrangements include:

1. Weekend courses, occupying the whole of a Saturday and Sunday. These are given in various hospitals in such subjects as infectious diseases, general medicine, the rheumatic diseases, orthopædics, obstetrics and gynæcology, plastic surgery, and clinical surgery.
2. Courses specially suitable for, though not restricted to, candidates for the D.A., D.C.H., D.OBST., M.R.C.P., and F.R.C.S. (final). These include general medicine, general surgery, proctology, midwifery, children's diseases, and anæsthetics. Some are full-time courses, lasting one or two weeks; others are spread over longer periods, taking place either in the mornings, afternoons, or late afternoons; they are intended particularly for postgraduates not free for full-time study.

The *Postgraduate Medical Journal*, the official organ of the Fellowship, is published monthly and contains a special section devoted to general postgraduate news

and information about the work carried on in all the main centres of teaching throughout the British Isles. The Journal can be obtained by subscription or in single copies.

The TUBERCULOSIS EDUCATIONAL INSTITUTE is a body composed of representatives from the Joint Tuberculosis Council and the National Association for the Prevention of Tuberculosis. The Institute organises refresher courses at home and overseas for doctors and at home university centres for nurses, health visitors, social workers, and administrators. Intensive three-day clinical courses for doctors are held throughout the year at Cheshire Joint Sanatorium, Market Drayton, King George V Hospital for Diseases of the Chest, Godalming, and the Red Cross Sanatoria of Scotland (Tor-na-Dee and Glen o' Dee). Particulars of courses may be obtained from the Secretary, Tuberculosis Educational Institute, Tavistock House North, Tavistock Square, London, W.C.1.

PROVINCES

Birmingham

Refresher courses for N.H.S. practitioners are held in the large non-teaching hospitals of the region, such as Dudley Road and Selly Oak Hospitals, Birmingham, the Royal Hospital, Wolverhampton, the North Staffordshire Royal Infirmary, Stoke-on-Trent, and the Coventry and Warwickshire Hospital. These are extended courses of one or two half-day sessions a week for eleven weeks. Occasional lectures are given at Hereford. A course for practitioners on the obstetric list is held at the Birmingham Maternity Hospital and short intensive courses on industrial ophthalmology at the Birmingham Eye Hospital. This university does not offer diplomas, but courses for the diplomas of the Conjoint Board are arranged from time to time when there are sufficient applicants. Numerous postgraduate students from abroad have been given facilities for higher education and research. The director of postgraduate education is Prof. W. H. Wynn, F.R.C.P., Medical School, Birmingham, 15.

The Institute of Accident Surgery has now been in existence since the end of 1950. It is associated with the Birmingham Accident Hospital, Bath Row, Birmingham, and is concerned with teaching and research in connection with the prevention and treatment of injuries of all kinds. Regular courses on accident surgery have been held for surgeons, industrial medical officers, and nurses, and for general practitioners. A three-day course on burns is being held early in October, 1953; and a week's course on accident surgery will be held during December, 1953. The Birmingham Accident Hospital is attended by postgraduate students throughout the year.

Bristol

The degree of doctor of medicine (M.D.), master of surgery (CH.M.), and doctor of philosophy (PH.D.) are open to medical graduates of other universities, but only to those candidates who have pursued original research in the university for not less than two years. In effect this regulation means that these higher degrees are open only to those graduates of other universities who hold appointments on the staff of the university or of one of the Bristol hospitals. The university grants diplomas in public health (D.P.H.) and in psychological medicine (D.P.M.). The diplomas formerly granted by the university in medical radiodiagnosis (D.M.R.D.) and in medical radiotherapy (D.M.R.T.) have been discontinued. The next course for part I of the diploma in psychological medicine will begin in October, 1953, and will cover a period of two terms. It will include lectures and demonstrations in special anatomy and physiology, pharmacology, and applied psychology. This course is obligatory for all those who wish to take the D.P.M. (Bristol). The course for part II will be designed primarily for the D.P.M. (Bristol), and will be held in the autumn and spring terms and part of the summer term, 1953–54. It will consist of lectures and demonstrations in the clinical aspects of adult and child psychiatry, mental deficiency, and associated subjects. The course will be open to a limited number of physicians practising in psychiatry, in addition to those preparing for the D.P.M. Training for the D.M.R.T. is given at the Bristol-Bath joint centre for radiotherapy, which deals with 1700 new cases of malignant disease every year. D.M.R.T. students are eligible to apply for junior posts in the department when these become available. A three-month course in child health, beginning in October, is usually held. This is suitable for candidates who wish to take the diploma in child health of the Conjoint Board. From time to time courses of lecture-demonstrations for general practitioners are arranged (on Sunday mornings). Courses were held in the spring and autumn last year, and again this spring, and were well attended. Six demonstrations in practical obstetrics were arranged at Southmead Hospital in March–May, 1953, and a visit to Barrow Mental Hospital during June. An arrangement exists by which medical practitioners who wish to attend hospital practice can do so. The director of medical postgraduate education is Dr. A. H. Gale, the University, Bristol, 8.

Cambridge

The School of Postgraduate Teaching and Clinical Research at present comprises the departments of medicine, experimental medicine, radiotherapeutics, and human ecology. In the John Bonnett Clinical Laboratories, pathological and biochemical services of the United Cambridge Hospitals are provided by university teaching officers under the direction of the professors of pathology and biochemistry. New accommodation for the medical school administrative headquarters and the department of medicine has been provided during the year on a site in the grounds of Addenbrooke's Hospital. The new premises include a hæmatological laboratory, a chemical laboratory, consulting and examination rooms, accommodation for the regius professor of physic, the lecturer in medicine, the research chemist, and research students, and administrative offices for the medical school. The transfer to new premises will not greatly increase the accommodation available to the department, but it brings together under one roof for the first time the medical, administrative, research, and technical staffs of the department of medicine and the medical school. Between October and July in each academic year special sessions are devoted to teaching by all members of the consultant staff of the United Cambridge Hospitals. A small number of undergraduate students are admitted to these teaching sessions. Other teaching activities include a clinicopathological conference held on the third Wednesday of each month, which affords an opportunity for general practitioners and others to meet the staffs of the teaching hospital and of the various departments of the medical school. One-day symposia on subjects of particular interest to general practitioners are held monthly on Saturdays throughout the academic year. These symposia usually take the form of lecture-discussions followed by case-demonstrations. Residential courses in midwifery are available for undergraduate and postgraduate students at the Maternity Hospital. All postgraduate courses and symposia are open, without fee, under a scheme of the Ministry of Health, to practitioners who are under contract with an executive council of the National Health Service, and who have not less than 500 (or in the case of a rural practice 250) persons on their N.H.S. lists. It is no longer necessary for a practitioner to submit an application for approval to the Ministry of Health before attending these symposia unless he wishes to claim for the employment of a locum. A practitioner who does not qualify for a grant under the Ministry of Health postgraduate scheme is charged a fee at a rate corresponding to that which would otherwise have been payable by the Ministry. The director of postgraduate education for the Cambridge region is the regius professor of physic, Sir Lionel Whitby. Practitioners desiring further details of postgraduate facilities should apply to the secretary of the medical school, Tennis Court Road, Cambridge.

Durham

The part-time course for the C.P.H. and D.P.H. is proving very successful and appears to be more popular than the whole-time course. 9 practitioners registered for the C.P.H. last October and 8 of these passed the examination held in March. The D.P.H. course began

in April and will continue until March, 1954, when the examination for the diploma will take place. The necessary instruction is provided by the department of public health, which is closely associated with the departments of child health, industrial health, bacteriology, civil engineering, and numerous other departments in the college for the purpose of providing specialised teaching in the various subjects covered by the syllabus. The next complete course for the certificate and diploma begins in October, 1954. Courses for part I and part II of the diploma in psychological medicine have been continued during the past year, and applications from candidates wishing to be admitted in October, 1953, are now being received. A postgraduate course for general practitioners was held in the medical school and associated hospitals during April and May. This consisted of eight consecutive Thursday afternoon sessions in various subjects, and included news of the latest developments in medicine and surgery. The demand for admission to the course was considerable and many applicants could not be accepted, the number attending being limited to 25.

Leeds

The University of Leeds grants two postgraduate diplomas, the diploma in public health and the diploma in psychological medicine. Both are now part-time courses, that for the diploma in public health being five terms, the certificate in public health being taken after two terms. The course for the diploma in psychological medicine covers eight academic terms. Extended refresher courses for general practitioners, comprising one half-day session a week for six weeks, and weekend refresher courses on special topics are arranged from time to time both in the teaching hospitals and in regional hospitals. The secretary of the Postgraduate Committee is Dr. T. A. Divine, School of Medicine, Thoresby Place, Leeds, 2.

Liverpool

Postgraduate courses have been held in general surgery (14 students attended), orthopædic surgery (13), anæsthesia (15), public health (9), radiodiagnosis (12), radiotherapy (3), and tropical medicine and hygiene (33). During the past session, three short refresher courses for general practitioners have also been held, each consisting of four weekly sessions. The first, on Obstetrics and Gynæcology in General Practice, was attended by 58 practitioners; the second, on Recent Advances in General Medicine, by 55 practitioners, and the third, on Children's Diseases and on Therapeutics, by 42 practitioners. Further information about postgraduate courses may be obtained from the dean of the faculty of medicine.

The Liverpool School of Tropical Medicine offers a course of instruction for the diploma in tropical medicine and hygiene granted by the University of Liverpool. Two such courses are held each year, starting at the end of September and the beginning of January and continuing for approximately three months. Only those students who hold a medical qualification registrable in the United Kingdom or otherwise recognised by the university, and who have attended the approved course of instruction in this school, are eligible to sit for the examination for this diploma.

The school also provides courses of instruction in public health, parasitology, and entomology for students taking the diploma in public health granted by the University of Liverpool. Courses of instruction in veterinary parasitology and entomology are given during each academic session to Liverpool University undergraduates taking the M.R.C.V.S. diploma and B.V.SC. degree. Facilities are offered to certain graduates who wish to carry out individual pieces of research work.

Manchester

During the session courses have been given in preparation for the diploma in psychological medicine offered by the university, and the course for the diploma in public health has been resumed. The latter is a part-time course extending over two years. Extended refresher courses for general practitioners have been given in obstetrics and in general medicine. Two intensive courses in industrial health have been held in conjunction with the British Council, mainly for students from overseas. Courses have been continued for the D.M.R.D. and D.M.R.T. of the English Conjoint Board. The certificate course for psychiatric social workers has also been held. The dean of postgraduate medical studies is Mr. R. L. Newell, F.R.C.S.

Oxford

The school of clinical research and postgraduate studies in the University of Oxford consists of the Nuffield departments of medicine, surgery (including neurosurgery), obstetrics and gynæcology, anæsthetics, orthopædics, and plastic surgery—each with a whole-time professor, a first assistant, and an appropriate research and clinical staff. Certain of the clinical appointments on the staffs of these departments are available for specialist-trainees from Great Britain, the Dominions, and the Colonies.

In addition to the provision made in the above departments for the training of specialists there are a number of trainee-appointments in the teaching hospitals (the United Oxford Hospitals) and in certain departments of selected non-teaching hospitals of the Oxford region. These appointments (senior registrars) are in the following branches of medicine: general medicine, pædiatrics, psychological medicine, chest diseases, pathology, general surgery, orthopædics and accident services, otolaryngology, ophthalmology, obstetrics and gynæcology, neurosurgery, plastic surgery, dental surgery, and radiology. Some of these are "paired" posts, the holders of which spend part of their period of training in a teaching hospital and part in a non-teaching hospital.

The facilities for postgraduate education for general practitioners are designed to provide regular contacts with consultants and specialists on the staffs of hospitals, and with work based on latest knowledge. The arrangements vary in the teaching hospitals (Oxford) and in the non-teaching hospitals (Reading, Northampton, and Aylesbury). All departments of the teaching hospitals are open to general practitioners on certain days and at certain times throughout the postgraduate year (September to July). On every day of the week (except Sundays) there are morning and afternoon sessions at which instruction is given to general practitioners and other postgraduates by consultants and specialists. Practitioners may attend any of these sessions at times and on occasions convenient to themselves; they may take either an intensive course of a week or a fortnight's duration or an extended course spread over a number of weeks or months. The university does not limit the number of sessions a practitioner may attend to a maximum of 22, though claims for the payment of fees by the Ministry of Health on account of National Health Service practitioners are limited to that maximum. Fees are payable for attendances at any number of sessions from a minimum of 3 to a maximum of 22. Assistants to general practitioners, who are not eligible for grant from the Ministry of Health, are permitted to avail themselves of any or all of these postgraduate facilities, without payment of fees, on application being made to the director of postgraduate medical studies. Practitioners who are not members of the National Health Service, and doctors from overseas, pay their own fees at the rates prescribed for National Health Service practitioners. In addition to the facilities outlined above short courses in special subjects are arranged for general practitioners during the spring and autumn months. A summary of ward rounds, clinics, clinical and lecture demonstrations, conferences, and short courses is circulated to all practitioners in the region by local medical and executive committees. The postgraduate arrangements for general practitioners at Reading, Northampton, and Aylesbury take the form of short courses in special subjects: one afternoon session a week for from three to nine weeks.

The director of postgraduate studies for the Oxford region is Sir Robert McCarrison, M.A., M.D., F.R.C.P. Practitioners wishing to avail themselves of these postgraduate facilities should apply to the secretary, Committee for Postgraduate Medical Education, 11, Keble Road, Oxford.

Sheffield

During 1952–53, weekly ward rounds for general practitioners have, as in each of the past few years, been

held in the United Sheffield Hospitals and the City General Hospital; and a one-day course on recent developments in rheumatology, similar to those arranged in 1951 and 1952, has been held. No diplomas in radiology are awarded by this university, but courses are available in preparation for the D.M.R.D. and D.M.R.T. of the Conjoint Board; and, although numbers have recently been insufficient to justify the organisation of definite courses in preparation for the M.R.C.P. or F.R.C.S., suitable instruction may be provided, by arrangement, for approved candidates. The recently created department of microbiology conducts courses for the university's own diploma in that subject. The arrangements required in connection with the pre-registration house-appointments prescribed by the Medical Act, 1950, appear, at the time of writing, to be progressing smoothly for the first large output of newly qualified doctors since the appointed day. The university's postgraduate committee continues to give attention to Sheffield affairs, and a regional postgraduate medical committee, centred on the university, has been set up to deal with the region as a whole. The question of interchange of senior registrars between teaching and non-teaching hospitals is one of the questions under consideration.

At ROFFEY PARK REHABILITATION CENTRE residential courses lasting one week are held for doctors and others. The syllabus is divided broadly under two headings: (1) maintenance of fitness at work; and (2) rehabilitation and resettlement. Classes are modelled on the lines of the open discussion group. Inquiries should be addressed to the secretary, Roffey Park Institute of Occupational Health and Social Medicine, Horsham, Sussex.

WALES

Cardiff

Schemes for postgraduate courses of various types for general practitioners continue to receive consideration, but practitioners seem to find difficulty in getting away from their practices for the time necessary to obtain satisfactory teaching of this kind. The courses for the diploma in tuberculous diseases continue to attract more postgraduate students than can be accommodated, and the short course in tuberculosis is proving useful to men in the Colonial Service and to others. The courses for the certificate and diploma in public health continue, although the numbers entering are small. The school maintains its policy of conducting the C.P.H. course on self-contained lines, not designed as a specific part of the D.P.H. courses. Consequently more students study and enter for the C.P.H. than seek admission to the final courses for the D.P.H. A standing arrangement exists between the medical school (through its professorial departments), the United Cardiff Hospitals, and the Welsh Regional Hospital Board for regional consultants to spend short periods in Cardiff. This goes on throughout the year. Regular postgraduate teaching is organised in some of the medical school departments in the United Cardiff Hospitals during the academic term. The dean of postgraduate studies is Prof. A. G. Watkins. Inquiries should be addressed to him, or to Provost R. M. F. Picken, at 34, Newport Road, Cardiff.

SCOTLAND

Aberdeen

Apart from postgraduate training of registrars in all departments, refresher courses for general practitioners are held. These are either fortnightly courses, or extended courses consisting of eight or ten weekly afternoon meetings. Certain graduates are, from time to time, attached to the different departments for special postgraduate research and study.

Edinburgh

The Edinburgh Post-Graduate Board for Medicine, representing the university and the Royal Colleges of Physicians and Surgeons of Edinburgh, arranges programmes of graduate studies. The board offers courses in internal medicine, general surgery, and medical sciences, and refresher courses for general practitioners.

Two courses in internal medicine, lasting twelve weeks, are held, starting in April and October of each year. These courses comprise lectures, lecture-demonstrations, clinical teaching, and clinical-pathological demonstrations; they are suitable for graduates wishing to specialise in medicine or who require a refresher course in the current outlook on internal medicine.

Two courses in general surgery are held each year, starting in March and October. These courses are of twelve weeks' duration; they include lectures on surgical pathology and selected surgical subjects, as well as clinical demonstrations. Clinical instruction is obtained by the attachment of graduates for periods of six weeks to a general surgical charge. In addition to the Edinburgh Royal Infirmary, other general and special hospitals in the city coöperate in the provision of clinical teaching facilities. A comprehensive course in the medical sciences of anatomy, physiology, pathology, bacteriology, and biochemistry is held in the summer; three hundred hours of instruction are given in this course, over a hundred of which are devoted to practical work. This course is suitable for those requiring a final preparation in these subjects. It is desirable that those taking this course should already have considerable basic knowledge. Similar courses of ten weeks' duration, starting in October and January, are organised by the Royal College of Surgeons under the aegis of the board.

General-practitioner courses have been completely reorganised, with the teaching either at the bedside or by means of lecture-demonstrations. Emphasis is laid on recent advances in treatment, and free discussion, as well as constructive criticism by members of the course, is encouraged. Courses are often booked up several months in advance, so those intending to apply should do so at an early date. Applicants should write, giving particulars of their medical qualifications and post-graduate experience, to Sir Alexander Biggam, F.R.C.P., the Director of Postgraduate Studies, Surgeons' Hall, Edinburgh, 8.

Glasgow

Glasgow University Postgraduate Medical Education Committee, representing the University and the Royal Faculty of Physicians and Surgeons of Glasgow, propose to offer the following courses during the coming session. An eight-week part-time course of instruction in anatomy, physiology, biochemistry, pathology, and bacteriology will be held, as in previous years, from October to December. The course is suitable for candidates preparing for the primary examinations for the surgical fellowships, and will provide a total of approximately 160 hours of instruction. The course is organised primarily for the junior staff of hospitals in the Western Region of Scotland, but it is also open to other applicants. If desired, an honorary part-time clinical attachment will be arranged for members of the course who have no hospital appointment. The medical school provides an annual course for the diploma in public health, and also a course for the diploma in industrial health in any year in which there are sufficient applicants. Short courses in other specialties are arranged from time to time when the demand arises, and are advertised in the medical journals. For the ensuing session, a short course in chemotherapy and a course in mental deficiency have already been arranged. Training in radiodiagnosis and radiotherapy, recognised for the D.M.R.D. and D.M.R.T., is available. Refresher courses for general practitioners are held from time to time; these consist largely of clinical demonstrations, but also include a few lectures on modern methods of treatment. All inquiries should be addressed to Prof. G. M. Wishart, director of Post-graduate Medical Education, the University, Glasgow, W.2.

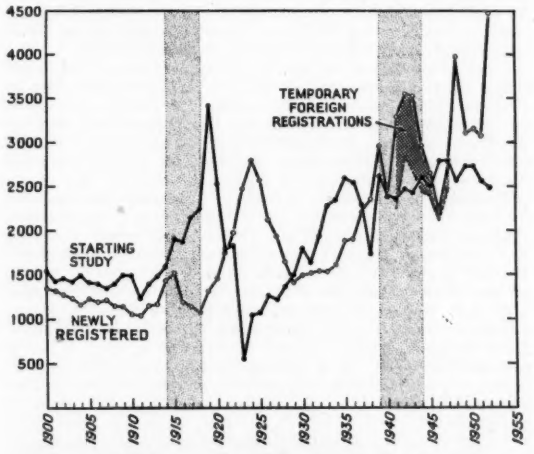
St. Andrews

The type of education and training which is offered in the university and its associated hospitals differs somewhat from that in other parts of the country. A large number of those in training in the university laboratories and attending postgraduate lectures are registrars and senior registrars within the hospital service of the region. There are, however, a certain number of vacancies always reserved for overseas students. The university has made available to first-year registrars laboratory training in anatomy and physiology with particular emphasis on one or the other, depending on whether the registrar has surgical or medical leanings. In the second-year registrar posts, the university laboratories of pathology, biochemistry, bacteriology, and pharmacology are open to the registrars,

and they may elect to study two of these subjects during any academic year. By arrangement with the regional hospital board, the registrars are free from hospital responsibilities during several afternoons a week to enable them to receive further education. In addition to this, registrars of all grades attend weekly open postgraduate lectures and there are weekly colloquia and clinical-pathological conferences. The number of registrars attending any university department at one time is not more than six, and this allows of personal tuition by the professor and his staff. The director of postgraduate education is Prof. R. B. Hunter, F.R.C.P.E., Medical School, University of St. Andrews, Small's Wynd, Dundee.

REGISTRATION

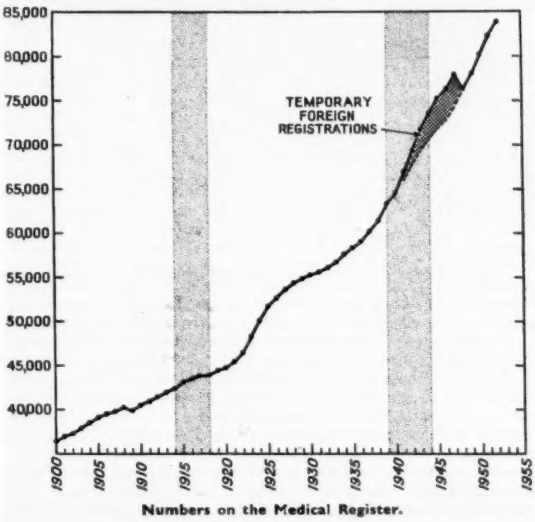
NO-ONE is a legally qualified medical practitioner unless his name appears on the Register kept by the General Medical Council. In the field of medical education the Council has a statutory responsibility for ensuring



Numbers starting study and registering.*

* The numbers shown as starting study are taken from the Medical Students' Register up to 1938; and since then from returns made by the medical schools to the General Medical Council. Both forms of notification are incomplete, but latterly returns have been received from almost all schools.

that the courses of study and examinations for any qualification conferring a title to registration do not fall below a proper minimum standard. The Council, through its Medical Disciplinary Committee, is also responsible for discipline within the profession. The Medical Act,



Numbers on the Medical Register.

1950, and Orders and Regulations made under it, provide that after Jan. 1, 1953, a person will not be eligible for full registration until he has, after passing a qualifying examination, served as a house-officer in approved hospitals or institutions for twelve months.

The approximate number of second-year students admitted to medical schools in the United Kingdom and in Ireland was 2498 during 1945–46, 2793 during 1946–47, 2722 during 1947–48, 2573 during 1948–49, 2734 during 1949–50, 2725 during 1950–51, 2565 during 1951–52, and 2494 during 1952–53. The numbers newly registered were: in 1946, 2237; in 1947, 2787; in 1948, 3968; in 1949, 3109; in 1950, 3160; in 1951, 3075; and in 1952, 4493.

The striking increase in the number of newly registered doctors in 1952 (4493 as against 3075 in 1951) is largely due to the addition of 1452 names to the Commonwealth List in 1952 (as compared with 471 in 1951).

The Defence Services

THE existing terms of service for medical officers in the Royal Naval Medical Service, the Royal Army Medical Corps, and the Royal Air Force Medical Branch were set out in detail in our Students' Guide last year. New and improved conditions of service for these officers will be announced presently, and we hope to be able to give details of the new arrangements in a forthcoming issue. Similar changes may shortly be introduced in the dental services.

Health Services at Home

PUBLIC HEALTH

POST-WAR legislation has brought many changes in the duties of medical officers of health, and the prospective entrant to the public-health service will wish to consider the current trends in development. Responsibilities have been lost: the National Health Service Act has transferred the control of hospitals and the clinical care of infectious fevers, tuberculosis, and venereal diseases to the regional hospital boards; other duties have passed to the newly created children's departments and to the Ministry of Agriculture. In their place greater scope has been created in the personal health services, and, as a specialist in preventive and social medicine, the medical officer of health retains a vital place in the community.

The greatest changes have taken place in the work of counties and county boroughs. Under part III of the National Health Service Act these have been designated as local health authorities, and they must provide clinics and other services for mothers and children, domiciliary midwifery, health visiting, home nursing, immunisation and vaccination facilities, ambulances, and domestic-help services. Some have preliminary schemes for health centres. Much of this work has grown rapidly, particularly the ambulance, home-nursing, and domestic-help services, and their importance to the community is great. The Act gives these authorities wide powers to initiate schemes for the prevention of disease and the care and aftercare of sick persons. The responsibility for the administration of all these services falls on the medical officer of health; in most areas he is also the school medical officer and is thus able to coördinate the preventive health services to cover children of all ages. In some areas further coördination has been secured by placing the authority's social welfare services also under the medical officer of health.

In environmental hygiene the duties of the medical officer of health are comparatively unchanged. These responsibilities have gradually evolved over the last hundred years, but in contrast to the early days, when the medical officer of health was personally concerned with the execution of many sanitary duties, health departments are now organised to free him from much of the detailed work, which is performed by trained lay officers, or even transferred to the care of other departments, as in the case of water-supply and sewage disposal. Naturally the extent of this devolution of responsibility must vary widely, and in rural areas problems of water-

supply and sanitation are a major concern of the medical officer of health. The supervision of housing conditions, again mainly through sanitary inspectors, is a health-department responsibility. All this work must remain under the general control of the medical officer of health, and he must supervise the purity of water-supplies even though their production is not his concern. Though less concerned with detailed work, supervision must be far wider than that by his predecessor of a hundred years ago.

Control of infection has always been one of the principal functions of the medical officer of health. Bacteriologists have made great advances in the identification of different strains within certain pathogenic species, and these new techniques applied to epidemic control have given him an instrument of precision in much of his epidemiological work. The application of specific prophylactic measures against various acute infections is now an important function of all health departments. Drastic reduction, if not the complete extinction, of certain infectious diseases has become a feasible target for all health departments.

Recent developments have increased the opportunities for the young medical officer to obtain a comprehensive training in public health. Additional posts of senior medical officer grade have been created in many of the larger towns, and in counties schemes of divisional administration have been evolved. The work of the medical officer of health to a number of county district authorities is often combined with an appointment as assistant or divisional county medical officer of health. The holder of such a post obtains a detailed knowledge of the community under his care, and, while retaining a high degree of individual responsibility, he suffers none of the disadvantages of rural isolation.

A sound clinical background is an essential qualification for the new entrant and a course in public health should be taken at an early stage. The curriculum for the diploma now provides a first part leading to a certificate in public health, suitable for persons engaged in clinical preventive medicine; and for these doctors a diploma in child health or in obstetrics and gynæcology is an advantage. The course of part II caters for those who intend to proceed to the diploma in public health, and this qualification is now necessary for anyone seeking an appointment as a medical officer of health.

Individual progress in a public-health career depends largely, if not entirely, upon the doctor's personal qualities; for, as adviser to his authority, the reputation of the medical officer of health depends on the soundness of the advice he gives. Quite apart from his statutory functions, he has an important part to play in promoting the health education of the community, and in helping to secure full coördination between the branches of the health service in his area. He is assisted by the regular liaison meetings, which are held in most regions, between the hospital boards and the county and county-borough medical officers of health. Most hospital boards rely on the medical officer of health to determine the urgency of the social grounds for admitting patients to hospital, especially in maternity cases and when considering the chronic sick. Many medical officers of health have been appointed as members of hospital medical advisory committees or of hospital management committees; and, through the National Health Service Act, a closer relationship with the general-practitioner services has now become possible. In sum, therefore, no other medical man is so well placed to survey the whole range of medical activity in an area.

INDUSTRIAL MEDICAL SERVICES

INDUSTRIAL or occupational medicine will offer increasing opportunities to young graduates because it is becoming more widely realised that the conditions under which people work, as well as other social factors, may affect their health for better or worse. Many people and organisations are pressing for an extension of the industrial medical services, but so far there has been little evidence that the few positive recommendations contained in the Dale report are to be implemented. It is perhaps unfortunate that the industrial health services were not merged with the National Health Service, and many feel that even now it is not too late. It will be useful to review the present position.

The main Government department supervising the health of industrial workers is the factory department of the Ministry of Labour and National Service. This department, which up to 1940 worked under the Home Office, dates from 1833 and administers the Factory Acts (1937 and 1948) with regulations on accident and sickness prevention, hours of work, amenities, and canteens. The inspectorate numbers about 412, of whom 16 are doctors. Members of the department, whether lay or medical, take part in the activities directed towards the prevention of illness and maintaining the health of the factory population. The medical inspectors are stationed in London, Birmingham, Sheffield, Liverpool, Bristol, Manchester, Glasgow, Leeds, and Wolverhampton; and from these centres they are able to deal with factory health and conditions in any part of the county. Under them 1750 general practitioners give part-time service as appointed factory doctors (previously called examining surgeons), examining all young entrants into industry, and periodically all those engaged in specific dangerous processes. In addition there are about 300 doctors employed whole-time in factories or groups of factories, and about 3000 are engaged in part-time work. A recent survey by the factory department of the medical services in different kinds of factories showed that of 243,769 factories in Britain, 4499 have arrangements for medical services other than those supplied by the appointed factory doctors. General medical service is provided in 2525 factories, and supervision of first-aid and ambulance rooms in 2511, while 2274 groups of workers are given periodical medical examinations. There are schemes for looking after workers on three trading estates—Slough, Bridgend, and Hillington. The Slough scheme covers 144 factories, Bridgend about 39, and Hillington about 69. On all three trading estates there are factories which employ fewer than 25 workers. It has been a common criticism of the industrial medical services that the workers at small factories are not catered for, and these three group services might well form a model for a national service. It is well to bear in mind, however, that even in factories where there are no doctors a close watch on conditions is maintained by the factory department.

Apart from the factory department, other government departments deal with various aspects of the industrial medical services. For instance, the Post Office, which employs more workers than any other department, has had a medical service since 1855; and since it deals with engineering and manual workers in addition to office staffs, it is partly an industrial medical service. The Post Office medical staff is now directed by the chief medical adviser to the Treasury, who has in addition a staff which deals with the health problems of the Civil Service. The Inspectorate of the Ministry of Fuel and Power has a medical section with a number of full-time medical inspectors. The National Coal Board provides a comprehensive industrial medical service for the industry which now has a staff of 58 whole-time doctors. The Ministry of Supply Medical Service deals with the health of the workers in the Royal ordnance factories, and in the research stations such as Harwell and Porton. The Ministry of National Insurance has a large medical staff both at headquarters and in the regions, which advises on compensation for industrial injuries as well as for other causes of ill health. The former silicosis and asbestosis board is now a part of the medical service of the Ministry. On the staff of the pneumoconiosis medical panels, as they are now called, are 24 whole-time medical officers who deal with the diagnosis and certification for compensation of cases of silicosis, asbestosis, and some other forms of pneumoconiosis. They also carry out periodical medical examinations of workers engaged in some scheduled occupations in which cases of pneumoconiosis are likely to arise. The centres from which the panels work are Swansea, Cardiff, London, Manchester, Sheffield, Southampton, and Edinburgh. Some of the newly nationalised industries have established medical services—for example, the Railway Executive and the London Transport Executive, both parts of the British Transport Commission. In the Railway Executive there is a chief medical officer assisted by 6 regional medical officers; in addition there are medical officers who look after smaller parts of the

regions. The London Transport Executive employs a chief medical officer with 8 full-time doctors. The National Dock Labour Board also has a medical service consisting of 7 full-time medical officers and 1 part-time medical officer. Some, but not all, of the regional boards of the nationalised gas industry have appointed whole- and part-time doctors to look after the health of the workers. A move is on foot to set up medical services in all regions.

In addition to investigations and research into industrial diseases conducted by medical inspectors of factories, mines medical officers, and works doctors, much fundamental research into environmental conditions has been carried out by the investigators of the Industrial Health Research Board of the Medical Research Council. Clinical and field studies made under the ægis of the council's industrial pulmonary diseases committee include inquiry into the pneumoconiosis of coalminers and the byssinosis of cotton workers. The London Hospital department for research in industrial medicine was established in 1943, and a few years later, in conjunction with the Ministry of Fuel and Power, a bureau for research into the pneumoconiosis of South Wales coalminers was set up at Cardiff. Other units of the council dealing with industrial health include the toxicological research unit at Porton, the groups for research in industrial physiology and psychology in Manchester, Cambridge, and London, and the industrial medicine research unit at the Birmingham Accident Hospital. There is also a unit for research on climate and working efficiency at the department of human anatomy at Oxford, a social medical research unit at the Central Middlesex Hospital, and a statistical research unit at the London School of Hygiene and Tropical Medicine. Problems on the health aspects of atomic energy are being dealt with at Harwell. Research into industrial health matters is also being undertaken by the university departments mentioned below. The Institute of Social Medicine at Oxford, which works under a joint board, also undertakes investigations into various aspects of industrial health. University chairs devoted to industrial or occupational medicine have been set up at Manchester and Durham, and lectureships at Glasgow and Edinburgh. The chairs of social medicine at Oxford and Birmingham include industrial medicine within their terms of reference, and the University of Sheffield has appointed a professor of social and industrial medicine. Students are likely to hear more about these subjects in their undergraduate courses. Postgraduate courses are held in London, Birmingham, Sheffield, and Manchester, and occasionally at other centres. Diplomas in industrial health (D.I.H.) have been instituted by the Society of Apothecaries, the Conjoint Board of the Royal Colleges of Physicians and Surgeons, Edinburgh University, and the Faculty of Physicians and Surgeons of Glasgow. Full-time courses for the diplomas are provided by the Society of Apothecaries of London, the Royal Institute of Public Health and Hygiene, and Manchester and Glasgow Universities. The Association of Industrial Medical Officers was formed some years ago by doctors interested in industrial health, and branches have been established in various parts of the country; the *British Journal of Industrial Medicine* is sponsored by this association in conjunction with the British Medical Association. The association has also since April, 1951, published a quarterly journal, called the *Transactions of the Association of Industrial Medical Officers*, which is devoted to the dissemination of information about the practical aspects of industrial medicine rather than to original research.

PRISONS AND BORSTAL INSTITUTIONS

THE medical service is a part of the general service class of the medical civil service. It is under the immediate control of the Director of Prison Medical Services at the Prison Commission. The service comprises principal medical officers (the equivalent Civil Service grading is senior medical officer), medical officers, and part-time medical officers. Whole-time medical officers are appointed to the larger prisons and Borstals and at the most important establishments there are principal medical officers, assisted by one or more medical officers. The principal medical officers also have advisory and other duties in connection with small groups of establishments. The work includes the general medical care of all prisoners and inmates and the performance of various medical duties prescribed by statutory rules and regulations. The making of psychiatric assessments, the provision of medical and psychiatric reports, and the giving of evidence in court when called upon are important aspects of the work. Surgical and psychotherapeutic units are established at selected centres. Candidates must be fully qualified and registered and should possess a sound knowledge of medical and surgical practice; preference is given to those who, in addition, have had postgraduate experience in psychological medicine.

Salaries are in accordance with the general Civil Service scales:

Medical officer* £1250 × £50–£1500 × £75–£1725.
Senior medical officer £1800 × £100–£2000.
*Linked to age 35 years with deductions of £40 for each year under this age and an equivalent increase for each year up to 40.

The appointments are pensionable. Unfurnished quarters, when available, are provided at a moderate rental. Salaries carry Civil Service pay addition. Appointments are made by the Civil Service Commission, 6, Burlington Gardens, London, W.1, to whom all inquiries should be addressed.

At the smaller prisons and Borstals no whole-time medical officers are employed; local practitioners are usually appointed as part-time officers. Further particulars of these appointments can be obtained from the Prison Commissioners, Horseferry House, Dean Ryle Street, London, S.W.1. Revised scales of salary for part-time medical officers have recently been agreed with the British Medical Association.

Services Abroad

COLONIAL MEDICAL SERVICE

VACANCIES in the Colonial Medical Service occur in all parts of the Colonial Empire, the greatest number being in tropical Africa and Malaya. Candidates must ordinarily be British subjects holding medical qualifications registrable in the United Kingdom and should have had at least twelve months' postgraduate experience in hospital before appointment. Candidates for the permanent service must be under 40 or 45 years of age, according to the age of retirement in the territory to which they are appointed. In West Africa this is 50 years, and in most other territories 55 years. In West Africa and some other territories officers may serve beyond the age of retirement with the Governor's permission. Contract appointments for short terms are available for candidates who are above the age-limits or who, while being within these limits, do not wish to commit themselves to a colonial career at the outset. Doctors in the National Health Service may also avail themselves of a scheme which has been brought into operation in many colonial territories whereby they take up appointments in the Colonial Medical Service for temporary posts up to six years without loss of pension rights in the National Health Service. The scheme provides for the payment of a gratuity at the end of the doctor's service abroad, but those who are eligible and who wish to transfer to the permanent and pensionable establishment of the Colonial Medical Service will have opportunities to do so. The Colonial Medical Service offers special opportunities and experience not obtainable at home, and that experience will be of great value to the doctors both in practices and in hospital appointments if they elect to return to this country. Officers appointed to the permanent service are normally required to take a course in tropical medicine and hygiene either before going overseas or during their first leave.

Medical officers are usually appointed in the first instance for general duties, which require all-round ability and a balanced outlook upon both preventive and curative medicine. Such duties often imply the charge of a district hospital and responsibility for the medical administration of a district, although many officers are employed on clinical duties in the large hospitals. Some posts are concerned purely with public-health work and for these the possession of a D.P.H. or special experience in preventive medicine is necessary. In the general field there are ample opportunities for original investigation,

and subsequent specialisation is encouraged. Opportunities are offered wherever possible for officers to study for postgraduate qualifications in approved branches of medicine, surgery, or public health.

A large number of specialist appointments exist which are normally filled from within the service by officers with the necessary aptitude and qualifications. For these appointments a very high standard of professional attainment is required. Senior administrative appointments are also almost invariably filled by the promotion of serving officers. The Colonial Medical Service is unified throughout the Colonies and promotion takes place in the administrative or specialist branches either in the territory where the officer is serving or on transfer to another. The scope for promotion is therefore considerable. An officer need not transfer if he does not wish to. The total of the establishments of the various government medical departments amounts to some 800 European medical officers and an even greater number of officers appointed locally.

Officers possessing qualifications or experience in pathology would be considered for appointment to the laboratory establishments. Workers in the laboratories carry out pathological and biochemical examinations for clinical, forensic, and public-health purposes. In this branch has been carried out a great deal of the research work which has led to important advances in the knowledge of tropical medicine and local health problems. Vacancies exist from time to time for women doctors, especially for those with special experience in obstetrics, school health, child welfare, and nutrition, although their employment is not necessarily confined to these subjects.

Naturally in tropical and subtropical countries diseases peculiar to hot climates predominate in the general pattern of morbidity; but the whole gamut of pathological conditions found in temperate climates occurs in the tropics, and doctors in the Colonial Medical Service are expected to keep abreast of the trend of modern medical opinion in Britain.

Of late years progress in the control of tropical diseases has been so rapid that Europeans can now live in comfort and in hygienic surroundings in areas which two decades ago were notoriously unhealthy. There is still, however, a great deal to be done; and with the expansion of medical services to raise health standards in all colonies, the Colonial Medical Service offers special opportunities and ample scope for initiative and original observation in clinical subjects, preventive medicine, and research. Full particulars of terms and conditions of service may be obtained from the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith Street, London, S.W.1.

SOUTHERN RHODESIA MEDICAL SERVICE

THE Government of Southern Rhodesia maintains a medical and public-health service with an establishment of 86 permanent administrative, specialist, and public-health officers and government medical officers.

In addition to the salaries quoted below, children's allowances are payable at rates prescribed from time to time. The rates of pay for whole-time officers are:

	Annual salary
Secretary for Health	£2844 (fixed)
Director of curative services; director of preventive services	£2592 (fixed)
2 directors of public-health laboratories; 2 regional medical officers of health; 2 radiologists; 1 ophthalmologist; 4 medical superintendents (including 2 at mental and leprosy hospitals)	£2226–£2442
2 radiologists; 2 regional medical officers of health; 1 pathologist	£2010–£2442
5 medical superintendents	£2010–£2154
4 assistant medical superintendents (at mental and leprosy hospitals)	£1794–£1938
4 medical officers of health	£1530–£1938
2 medical officers of health (female)	£1530–£1722
52 government medical officers	£1074–£1578

Government medical officers are permitted private general practice in the rural areas; the value of this varies considerably and may reach £1000 per annum, but where the net receipts fall below £200 per annum, an allowance is paid up to that figure. In other areas no private practice is allowed and an allowance of £200 per annum is paid in lieu. Medical superintendents and certain specialist officers are permitted consultant practice, the cash value of which is not very great.

The duties of government medical officers cover the supervision of 21 general and special hospitals and 88 native clinics, and attendance on police, boarders in government schools, and prisoners. They also undertake medicolegal work and public-health duties. Vacation leave accrues at one-eighth of service and may be taken in periods not exceeding 184 days at a time. After two years' satisfactory service an officer may be appointed to the fixed establishment and may then be granted study leave with reduced pay or without pay for purposes of obtaining additional qualifications. All officers are obliged to contribute to a pension scheme, and the retiring age is 60.

Vacancies are normally advertised, but where possible the more senior posts are filled by promotion within the service. Further details and information regarding settlement in Southern Rhodesia may be obtained from the secretary, Office of the High Commissioner for Southern Rhodesia, Rhodesia House, 429, Strand, London, W.C.2.

MEDICAL MISSIONARY SERVICE

CHRISTIAN medical men and women who wish to offer their services where the need is greatest will find opportunities in medical missionary work. There are university medical schools, central and rural hospitals, and many opportunities for public-health work and research. Christian missions played a major part in giving China a modern medical profession. In India and Pakistan they have helped to maintain high ethical and professional standards, and have specialised in nursing and medical education. In Africa and other of the less-developed regions they have pioneered rural health services and the training of subordinate staff. In many parts of the world the work is becoming integrated with the government services though still maintaining its identity. For undergraduates pledged to this service there are hostels in London and Edinburgh. After qualification, a period of eighteen months or two years in resident appointments is advised for all and also special diplomas or higher degrees for some. Under certain circumstances exemption is given from national service. Special missionary training is required by some societies. Service is for terms of from eighteen months to five years, according to the country and climate; there are opportunities for postgraduate study during furloughs. Offers for life service are preferred, but short terms are considered. Salary is on a missionary subsistence basis with allowances, free passages and quarters, and pension provision. There are schools for missionaries' children at home and in some of the fields. Applications from students or qualified men and women should be made either to the secretary of one of the denominational or interdenominational missionary societies, or through the local branch of the Student Christian Movement or the Intervarsity Fellowship, or to the Chairman, Medical Advisory Board of the Conference of British Missionary Societies, Edinburgh House, 2, Eaton Gate, London, S.W.1.

THE MEDICAL RESEARCH COUNCIL

THE Medical Research Council, originally established in 1913 as the Medical Research Committee, is appointed to administer the funds provided annually by Parliament for the promotion of research in medical science. The council is under the general direction of the Committee of the Privy Council for Medical Research, of which the Lord President, as chairman, is the minister responsible to Parliament.

The members of the council are appointed by the Committee of the Privy Council for a period of four years. There are 12 members in all; 9 are chosen for their scientific qualifications, and the remaining 3 are lay members, one of whom must be a member of the House of Lords and one a member of the House of Commons.

The council is not constitutionally a government department; its staff are selected and appointed by the council itself and are not Civil Servants. The position which the council occupies enables it to foster effective relations between science and the state, and its activities in medical research are unrestricted by territorial or departmental limitations of function. The council maintains close touch with those Government departments

responsible for public health; it is able to collaborate freely in subjects of common interest with its sister research organisations, the Department of Scientific and Industrial Research and the Agricultural Research Council, and to have direct relations with cognate organisations in other countries.

The council's administrative headquarters are at 38, Old Queen Street, Westminster, London, S.W.1, and the scientific staff are housed in more than 40 establishments located mainly in hospitals and universities throughout the country. The council also maintains laboratories in the Gambia.

The council's central research establishment, the National Institute for Medical Research, has separate divisions of biochemistry, chemotherapy, bacterial chemistry, physiology and pharmacology, human physiology, experimental biology, bacteriology and virus research, physical chemistry, biophysics and optics, and biological standards. The interests of the independent research units range from fundamental laboratory studies, such as biophysics, to various aspects of clinical research and of social and industrial medicine. The council's annual report, published by H.M. Stationery Office, gives a summary of the work in progress.

The close association of most of the council's establishments with hospitals and universities is valuable from many points of view, especially in the opportunity it provides for collaboration in joint schemes of research. Senior members of the council's staff are frequently given the status of honorary physicians of the hospitals in which their units are situated, while members of units accommodated in university departments are in many cases given honorary university appointments and participate to a limited extent in teaching. The council's total scientific staff numbers over 400, of whom over a third are medically qualified. Its research establishments vary widely in size. The largest is the National Institute for Medical Research at Mill Hill, but the average research unit consists of from 5 to 10 scientific workers with a number of technical and clerical assistants.

The aim of the council is to provide the opportunity for a career equivalent to that offered in the universities to men and women of equal ability and experience. The council's salary scales for scientific appointments are based on this principle; and although there is no common scale for all the universities in the United Kingdom, the council's salary grades correspond approximately with the ranks of professor, reader, senior lecturer, lecturer, and demonstrator. Thus, the salary of a director of one of the council's clinical units is equivalent to that of a whole-time professor of medicine with an honorary contract as a consultant in the National Health Service. The salary of a non-clinical director would normally be equivalent to that of a major non-clinical or purely scientific chair. Apart from directors, there are other posts in the council's larger establishments, and particularly at the National Institute for Medical Research, which carry remuneration at or near the professorial level. For the most part, salaries are not fixed in relation to particular posts but rather with reference to the qualifications, experience, and responsibilities of the individuals. Promotion to a higher grade may be awarded on such grounds without change of post.

New appointments to the scientific staff, except in the case of senior posts, are normally made for definite periods or are subject to review at intervals. Later, the possibility of a permanent career with the council is considered; and in suitable cases, when an adequate degree of seniority has been attained, the council is prepared formally to express its intention of continuing employment until the normal retiring age of sixty has been reached, with the possibility of extension to sixty-five. Superannuation provision—normally under the Federated Superannuation System for Universities—is made for all appointments of substantial duration.

THE PUBLIC HEALTH LABORATORY SERVICE

On behalf of the Ministry of Health, the council administers the Public Health Laboratory Service, which was originally set up as an emergency service in 1939 and has since become permanent. There are over forty separate laboratories in England and Wales. In addition to their routine duties, members of the staff of the service, whose salary scales are normally equated with those of the National Health Service, undertake research in bacteriology and epidemiology. The service also maintains a number of special laboratories which act as reference centres for particular infections, and are engaged largely in research.

A booklet giving details of the opportunities for appointment to the scientific staff of the Medical Research Council may be had on application, together with any other information about the functions of the Medical Research Council and of the Public Health Laboratory Service, from the secretary, Medical Research Council, 38, Old Queen Street, Westminster, London, S.W.1.

THE BRITISH MEDICAL STUDENTS' ASSOCIATION

THIS association was founded in 1942, and now has a membership comprising the student bodies of all the medical schools in the provinces, Scotland, and Northern Ireland, and an increasing majority of those in London. It is a purely professional organisation, providing a means of communication between students of different universities, and between British medical students and those of other countries. It presents the views of medical students to the medical profession, to government departments, and to other interested bodies. It functions through an annual general meeting and regional councils; and it organises regional, national, and at times international clinical conferences, which are appreciated not only for their academic interests, but also for the opportunities they provide for meeting medical students from different parts of the country, and the world. Local activities of branches include lectures, visits, discussions, and the showing of films from the B.M.A. film library. Among its publications are the *British Medical Students' Journal*, the B.M.S.A. Diary, and an annual list of hospitals willing to offer facilities for students to gain experience during the vacations. Problems of students' grants from local and national authorities are dealt with both in general and in individual cases by a grants secretary, an especial difficulty at present being the payment of vacation-course allowances to clinical students. Provisional registration having come into effect rather earlier than was hoped, in view of the numbers of married ex-Servicemen still unqualified, the association has been concerned, with the B.M.A., in negotiations with the Ministries affected in an attempt to ensure that such people should not suffer financial hardship during their first year as housemen. There has been considerable progress, but the whole position is under constant review, and the great need is for definite factual evidence of particular cases.

The BRITISH STUDENT TUBERCULOSIS FOUNDATION, of which the B.M.S.A. is a sponsoring organisation, has for some time been running a pilot student convalescent study centre at Pinewood Sanatorium, Wokingham, Berkshire. Plans are now well advanced for the establishment of a permanent centre. In the matter of sickness and other insurance, the association has made arrangements with an insurance agency, set up by the profession for its own guidance, for the establishment of a special section to advise medical students. Attempts are also being made to clarify the position of the student with regard to National Health Insurance.

The association has recently published a survey of existing schemes in various medical schools whereby students can spend some time with general practitioners. The survey has been widely welcomed, and is being used as a working basis by authorities planning similar schemes.

An international secretariat caters for students wishing to visit medical schools abroad, and also arranges hospitality for foreign students coming to Britain. To help in this and other projects, the B.M.S.A., and medical-student organisations in Scandinavia and the Netherlands, formed the International Federation of Medical Student Organisations, which, despite its name, is developing successfully and gaining some recognition for its work. Great Britain, represented by the B.M.S.A., was the first chairman nation and is arranging for its 1954 international clinical conference to be held in Britain next summer.

The next annual general meeting of the association will be held in Bristol on Nov. 7–9. It is hoped that all

member schools will send full delegations, and observers from other schools will be welcome.

All correspondence should be addressed to the Secretary, B.M.S.A., B.M.A. House, Tavistock Square, London, W.C.1.

EMPIRE MEDICAL ADVISORY BUREAU

THE British Medical Association has set up the Empire Medical Advisory Bureau with a view to making the stay of overseas medical visitors to this country as profitable and pleasant as possible, by welcoming them and providing a personal advisory service. The bureau, which is at B.M.A. House, Tavistock Square, London, W.C.1, caters for Dominion and Colonial medical men and women who are staying in this country for post-graduate education or other purposes. Information is obtainable about postgraduate education and courses of study for higher qualifications; and inquirers can be put in touch with the organisations and authorities providing postgraduate education. The visitor who wishes to see something of the latest medical work in his own specialty can be put in touch with the appropriate experts.

A register of suitable hotels and lodgings is maintained by the bureau, and every effort is made to help visitors to solve the problem of finding somewhere to live. By social functions and in other ways doctors from the Dominions and Colonies are enabled to meet each other and prominent members of the profession in this country. General information about travel, sports facilities, exhibitions, theatres, &c., may also be had. The bureau can be of greatest service to the visitor if he writes as long as possible in advance of arrival, giving information on the following lines: projected date of arrival, mode of travel, whether accompanied by wife, period of stay, objects of the visit, and in what ways assistance is desired. On arrival a letter of introduction from the local hon. secretary of the visitors' medical association, although not essential, would be welcome. The medical director of the bureau is Dr. H. A. Sandiford, to whom all communications should be addressed.

INTERNATIONAL MEDICAL VISITORS BUREAU

To further coöperation with fellow member associations of the World Medical Association, the British Medical Association has set up the International Medical Visitors Bureau to provide a personal advisory service to doctors visiting the United Kingdom from countries outside the British Commonwealth. The bureau, which is at B.M.A. House, Tavistock Square, London, W.C.1, offers information on postgraduate education facilities, while visits to hospitals and clinics can be arranged and help given in finding accommodation. General information on travel, car hire, theatres, and exhibitions is also available. The medical director of the bureau is Dr. H. A. Sandiford, to whom all communications should be addressed.

THE MEDICAL WOMEN'S FEDERATION

ALL qualified medical women are eligible as members of the Medical Women's Federation, which has active local associations all over the country and in Northern Ireland, as well as a large London association and an overseas association linking up members all over the world. The federation is non-political. It provides medical and social meetings for its members and publishes a quarterly journal reviewing subjects of special interest to women doctors. These naturally cover a wide tract of social medicine, including maternity and child welfare, women in industry, the care of children and of difficult and delinquent children, the management of nursery schools and day-nurseries, women in prisons, children in approved schools and remand homes, the illegitimate child, and many related subjects. Advances in obstetrics and gynæcology, and psychological studies of women and children are also naturally of special interest to women doctors; recent work in these branches of medicine is reviewed in the journal. From time to time the federation undertakes social studies and publishes the results. It is also able to protect the interests of its members by presenting arguments in any cases where there has been discrimination against women doctors. The federation's headquarters are at Tavistock House North, Tavistock Square, London, W.C.1.

In England Now

A Running Commentary by Peripatetic Correspondents

IT is a cross which I am becoming accustomed to bear that after all these years of public speaking I am still not a Public Speaker. Not for me the polished orotundities, the yeasty metaphor, the effortless scintillation. My slightest public utterances are preceded by days of malaise in which my sluggish wits mumble together, and the oratorical pearls of preceding speakers pass unheeded through my thudding eardrums. As the fatal moment arrives when the chairman calls upon Doctor, ah, Doctor, um . . . to deliver his paper on (here he peers closely at the agenda) . . . to deliver his paper—the witches broth produced by my tormented adrenals deprives all but my hypothalamus of its function.

All this is a legitimate occupational hazard; one cannot make a congress without breaking a few addled eggs. I am used to it all now: the commiserating glance of my neighbour as I return to my seat, the convulsive clapping of those awakened by the commotion, and the ghastly silence when the chairman calls for a discussion of the most valuable and interesting paper to which we have just had the pleasure of listening. But at the First World Conference on Medical Education last week I plumbed a further depth of degradation; I was Simultaneously Translated.

To a man who is virtually a pithed preparation when he stands up to speak, there is something curiously unnerving in knowing that when he mutters a dehydrated "Mr. Chairman, Ladies and Gentlemen" into a microphone—enough in itself to appal the stoutest heart—what reaches his audience may well be "¡Señor Presidente, Señoras y Señores!" impeccably enunciated in a clear high feminine voice. Nor does the certainty that three-quarters of the audience have switched over to the French version to improve their accent and that the remainder are fiddling with the apparatus in the hope of getting the Light Programme, steady his mind for the peroration. His Little Jokes congeal on his tongue as he realises they are untranslatable, and in the ensuing confusion colloquialisms and slang rise tumbling to his lips till the red light mercifully cuts them off. Meanwhile the tape recorders grind majestically on, enshrining his part in the proceedings for his children's children.

Perhaps it is all to the good. At least I know why there has been all this fuss over Korea. I know what a United Nation feels like.

* * *

The student regards his first stethoscope as an amulet rather than as a stigma. He is traditionally exhorted to choose any variety, but to grow old with it. As he does so, he has to fight off the suspicion that his instrument fails to cater adequately for the refinements of his special sense. In some way, other people have made a better marriage with the stethoscope of their choice. Yet any change soon leads to a perverse belief in the superiority of his old model. But though he becomes chary of blaming his stethoscope, he is always apprehensive lest his trust may be misplaced. His colleagues, secure in their superior knowledge of acoustic theory, effect a wild variety of design. The basic genera were formerly defined by the bell and the diaphragm, and by pink and black rubber tubing. Increasing age was estimated by the onset of an exfoliative dermatitis of the metal parts, and by a growing flexibility of the unruly rubber, combined with a tendency towards pathological fracture of the 'Bakelite' earpieces. Each new set of medical clerks adds to the species. The orthopædic revolution is reflected in the appearance of artificial screw-on limbs, and perhaps the experimental endocrinologists have suggested the parabiotic systems of bell and diaphragm. Little chromium-plated taps control the internal aerodynamics, and add to the difficulties of maintaining a clear airway.

Increasing complexity and the play of these conflicting emotions around a multitude of stethoscopes may lead to sales resistance. This opens up new fields for the advertising expert. We may expect to be inundated with blotting pads extolling the virtues of the 'Whispering Pectorilophone.' These will be annotated with credits:

"I had never elicited d'Espine's sign until I purchased your wonderful stethoscope—Dr. N. A. D. [Cheltenham]"; or "Auscultation is now one long triple rhythm—Dr. B. O. R. [Glasgow]." We are certain to be assured: "Consultants use no other." Under pressure such as this, we suspect that the student, who disclaims ever having heard anything through his tubes, will welcome the appearance on the market of a stethoscope specially designed for doctors who are hard of hearing. So will we.

* * *

$x^2+y^2+2gx+2fy+c=0$. I was shaken when they told me that all that equalled nothing; in fact, it was at this stage of my schooling that I decided that mathematics, particularly Cartesian coördinates, was not for me. I suppose this equation was merely the last (and fatal) one of a long series of grains of mathematical poison forced on me by a variety of Borgia-like teachers. Teachers of mathematics! What stories I could tell of them. Come to think of it, what stories they could tell of me. Be that as it may, let me say that maths teachers are like biochemists—I have never met a normal one. Of course, as long as $x^2+y^2+2gx+2fy+c=0$, the poor fellows haven't much chance to achieve normality. You have to be well round the bend, if not well up the final straight, to appreciate stuff like that.

Have you noticed that maths teachers tend to be large men of high colour, and with loud voices and short tempers? Also, that they tend to have a poorly developed sense of humour and to be restricted in their thinking processes? The latter point was well exemplified by an old teacher of mine. This worthy drew two parallel lines on the blackboard; "Look!" he screeched at us, "Look! They're parallel. They can never meet!" Sympathising with the plight of the unfortunate lines I asked if, perchance, they might encounter one another in infinity. I went on to mention that as Einstein considered space to be finite, there was no reason why a clandestine meeting of the lines could not be arranged in outer space. The effect of these mild observations on our teacher was interesting. His eyes popped out like organ-stops, his colour became that of a ripe plum, and large blood-vessels over his face and neck filled and pulsated with a mixture of blood and fire (Bohnhedd's syndrome). I cannot repeat what he said when the power of speech returned to him; I can only say that Einstein came off badly and I came off even worse. This has been my experience all along the line with teachers of mathematics, and, as long as $x^2+y^2+2gx+2fy+c=0$, it will doubtless be the experience of many others.

* * *

Once again our American colleagues have stolen a march on us with their "candied tongue depressors" for the "little patient." These appliances are said to be "sanitary, economical, convenient," and they come in assorted flavours, individually wrapped. Obviously they have been produced in response to the demand from patients, but it is not clear whether the patient is to enjoy the candy before or after the examination of his mouth, or whether the depressors are coloured according to flavour. But surely this is not the last we shall hear of this new field of medical progress? What about sugar-free candied tongue depressors for diabetic children and gluten-free depressors for those with cœliac disease? Edible stethoscope tubing made of liquorice would be a great favourite judging by the way most babies love to gnaw the tasteless rubber tubing; and a sanitary, flavoured chest-piece could be used for the more refractory patients. Ophthalmoscopes which projected pictures of Mickey Mouse or of Superman on to the ceiling would be both useful and instructive, and auriscope specula which contained tiny musical boxes would serve both to amuse and quieten small patients and as a quick check on hearing. But why should I give away all these brilliant ideas? I must patent my inventions and form a limited company: Dainty Diagnostics sounds quite nice—or Tearless Therapy Ltd.

* * *

For many years now our hospital has boasted a beautiful croquet lawn and in the summer months it has been the habit, after lunch, to enjoy a leisurely game with our distinguished chief. His friendly "Anyone for croquet?" has up till now provoked a generous response.

Note, I said "up till now." During the last few weeks a series of irregularly placed flags sunk in low holes has appeared on the adjacent lawn. This, we are led to believe by that section of the hospital who call themselves the chest unit, represents a putting-green. They now choose to ignore our croquet lawn except to make cryptic remarks in which the terms "ante-Waksman," "pre-sulphone," and even "gold-therapy era" are often used. The feelings of our chief—after his usual question to his old adversary the chest physician had been met with "Sorry, sir, but I'm playing a two-ball stroke-play foursome"—can only be likened to the emotion that surged through the breast of Freud when Adler advised him that henceforward he would be paddling his canoe unaided.

And the rot is spreading; in the last few days the radiologist and the anæsthetist have been disappearing after lunch. They are hinting strongly that a little practice in some game which they assert helped England to defeat the Armada might do the same for us in our sallies with the local regional board.

* * *

About this time of the year we begin to have trouble with our exchange scholars and travel grantees who have just got back from the States. We do not refer, of course, to those simple souls who come back with a 3D sweater girl bulging at the lower end of their ties ("Strictly for Laughs"), or with a pair of luminous socks ("They Shine in the Dark; One Red, One Blue"). Nor do we mean the more complex personalities who offer us cigarettes ("King-size this side, Regular the other"), or start convulsively and say "You're welcome" at inappropriate moments. Our friends are cast in a more subtle mould; the trouble goes deeper than this. "Oh," they ask, "do you mean to tell me *chocolate* is off the ration?"; at the cinema they peer offensively around in their attempts to locate the screen ("so *tiny*"); in the restaurant they embarrass us by asking for the Sea Food Menu and declining coffee with a delicate shudder. They spend fruitless moments looking for Channel 7 on our television set, they ask for donuts with a slight emphasis on the elided letters, and they drag us into book-shops to look for gramophone records. Some of them even use coat-hangers in their cars.

This sort of thing reaches its height in one of our own department's returnees, a hitherto rather colourless scientific type, who was discovered the other day absently wandering round the basement looking for the 'Coca-Cola' machine. It was after we had found him staring at a pound-note in a puzzled way and complaining that it wouldn't go into his bill-fold that we gave up trying to take no notice. "Tell us," we begged, "tell us about America." The resulting session has left us in an apprehensive state, and we have placed ourselves in quarantine as a precaution. When our friend thanked us for our attention we replied, to our horror, "You bet," and since then symptoms are developing rapidly. Only this morning we had an impulse to put up a notice saying "Think" over our bench.

* * *

With the post-war increase of facilities for recreation and refreshment in London there is once more a bewildering choice of theatres and restaurants to beguile the mind and satiate the appetite. But soft lights and period furniture are no guarantee of a good cuisine and each season little guides appear to advise the visitor what to see and where to eat. Though we discriminate in our leisure we have not yet learnt to discriminate about the same sort of things in our work. Has the time not come for a *Guide to Residential Amenities* for the discriminating resident?

The A——— Hospital, London. Residents' quarters in main hospital block providing dry access to wards except for the isolation block which is reached along 400 yards of pot-holed pathways or across the tennis court, the netting of which is as permeable to the players as it is to the balls.

St. T———'s Hospital, Pottering-on-Sea. The two residents share a three-roomed flat. It is therefore stipulated that they should be of the same sex. Meals are good except on Wednesday evenings and Sundays when one of the boilermen deputises for the cooks who are off duty. There is a frequent ambulance service to the neighbouring hospital. The main road passes close to the sea and is not visible from the hospital. Bathing is dangerous at ebb springs.

Notes and News

MEDICAL FILMS AT THE EDINBURGH FESTIVAL

THE films selected for the International Festival of Realist, Documentary, and Experimental Films at Edinburgh are seen by the public, so the medical films must contain no surgical operations or shots which might offend the squeamish. Despite this limitation, the programme gave a fine cross-section of the varied purposes for which medical films are made.

Perhaps the most interesting film was the British *Prevention of Cross-infection—Airborne Infection*, the third in the series on the spread of infection made for the Ministry of Health. The cinefilm is well suited to show effectively how an invisible infection may lurk on everyday articles. In an earlier film, on gastro-enteritis, the infection was represented as a black material which could be seen on the hands of the nurse and on everything she touched. In this latest film the staphylococcal infection was represented by a fluorescent material which glowed only when seen in ultraviolet light. Toys and other objects in the hands of the children appeared quite normal until the ultraviolet light revealed the infection. By this means the film showed the different routes by which infection can be spread. The American film *Unsuspected* showed the social problems that arise when the mother of a young family develops tuberculosis.

The days when the film was used as a photographic record of an event, operation, or experiment are passing. Instead many medical films now combine live photography with animated diagrams and cinemicrography. *The Human Blood Fluke* dealt with the history, geographical distribution, and life-cycle of the *Schistosoma mansoni*, its laboratory maintenance, and the effect of chemotherapy. The colour photography was excellent and some of the sequences had the beauty of a Norman McClaren cartoon. A sponsored Disney, *How to Catch a Cold*, in which Common Sense told Common Man how colds are caught and spread, showed how the comic cartoon may serve health education.

Medical films are not only used for teaching. The doctor is interested in the wider aspects of his profession, and the film *And the Earth Shall Give Back Life* was an interesting review of antibiotics in America. In *A Two-year Old Goes to Hospital* [1] the cine-camera was used as an impartial observer in a psychological investigation. A child, admitted to hospital for 8 days, was observed by the camera at regular times each day no matter what she was doing. The film was fascinating to watch and would be enjoyed by audiences beyond the study group for whom it was designed.

POLIOMYELITIS IN ENGLAND AND WALES

UNCORRECTED notifications of poliomyelitis in England and Wales during the week ended Aug. 22 were as follows (figures for previous week in parentheses): paralytic 144 (186), non-paralytic 126 (132); total 270 (318). Thus notifications were 48 fewer than in the previous week.

W.H.O. Aid for Greek Earthquake Victims

The World Health Organisation has approved an estimated $25,000 supply programme for the prevention of epidemic disease on the earthquake islands in the Ionian Sea. The supplies will include water-purifiers, galvanised piping, rat-poison, and tetanus prophylactics. Dr. Duurt Rijkels, a staff member of the W.H.O. regional office for Europe, who has visited the area at the request of the Greek government, reports that food-supplies are well organised and medical personnel of all categories are successfully dealing with the situation. The Greek government has sent six teams, consisting each of a doctor, four nurses, and three sanitary engineers, to care for the wounded and to improve health conditions. The number of victims is less than was originally feared. Figures established so far are 200 known dead and 800 wounded, of whom about half are suffering from severe injuries. Bodies are still buried under the ruins, and the number of dead may exceed 200.

British Association of Plastic Surgeons

A meeting of this association will be held on Thursday, Friday, and Saturday, Sept. 10, 11, and 12, at Salisbury. Further particulars may be had from the secretary, 45, Lincoln's Inn Fields, London, W.C.2.

1. See *Lancet*, 1952, ii, 1122.

International Scientific Film Association

The seventh congress of this association is to be held in London from Sept. 18 to 27. The programme of the medical group includes a symposium on Image-convertion Technique and a discussion on the Film in Teaching Diagnosis. Further particulars may be had from the congress secretariat, 164, Shaftesbury Avenue, W.C.2.

Shortage of Doctors in Northern Ireland

At a meeting on Aug. 25 of the North-West hospital management committee of Northern Ireland, which controls three hospitals in Derry and one in Limavady, Mr. J. G. Pyper, surgeon to the area, said that there was a grave shortage of house-officers in these hospitals. Coleraine, Dungannon, and Banbridge hospitals and the Musgrave Park Hospital in Belfast were also having difficulty in finding junior staff. Dr. Pyper believed that the shortage was due to the abnormally low number of doctors qualifying this year. "We have managed to keep going in August because it is the holiday month," he added, "but when the rush comes we will not be able to cope unless something is done."

Births, Marriages, and Deaths

BIRTHS

BOUCHER.—On Aug. 18, at Dorchester, Dorset, to Betty (formerly Thompson), wife of Dr. P. R. Boucher—a son.

DEATHS

SEARLE.—On Aug. 30, suddenly at sea, Walter Netley Searle, M.B. N.Z., F.R.C.S., F.R.C.O.G., of 29, St. Edmund's Terrace, London, N.W.8, aged 49.

Appointments

BATTEN, R. L., F.R.C.S.: surgical registrar, Weston-super-Mare Hospital.

BROMLEY, L. L., M.A., M.CHIR. Camb., F.R.C.S.: surgeon in charge of the thoracic department, St. Mary's Hospital, London.

FALKMAN, S. C. J., L.R.C.P.E., D.OBST., D.P.H.: asst. county M.O. and M.O.H., Sedgley and Tettenhall urban districts, Staffordshire.

HUNTER, R. A., M.D. Lond., M.R.C.P., D.P.M.: asst. to the director of the York Clinic, Guy's Hospital, London.

MCCALL, T. H., M.B. Lond., D.A.: consultant anæsthetist, Doncaster hospitals.

SCOTT, W. M., M.A., M.B. Camb., F.R.C.S.: consultant surgeon, Doncaster Royal Infirmary and Montagu Hospital, Mexborough.

SEARLE, C. W. A., M.A., M.D. Camb., D.O.M.S.: clinical asst. (refraction), ophthalmic department, Maida Vale Hospital for Nervous Diseases, London.

SLATTERY, J. A., M.R.C.S., D.P.H.: asst. county M.O.H., Gloucestershire.

County Council of the West Riding of Yorkshire:

DEMAINE, BARBARA, M.A., M.B. Aberd., D.P.H.: senior asst. county M.O., Conisborough, Mexborough, and Dearne urban district councils and the West Riding Council.

GRAHAM, J. A. G., M.B. Edin.: asst. county M.O., Wetherby and Tadcaster rural districts.

GRIFFITHS, E. P., M.R.C.S., D.OBST., D.C.H.: asst. county M.O., Maltby urban district, Kiveton Park rural district, and Rotherham rural district.

LEWIS, I. H., M.B. Aberd.: asst. county M.O., Hemsworth urban and rural districts.

East Anglian Regional Hospital Board:

ALBERTS, FRANK, M.B. Lond., D.A.: consultant anæsthetist, Wisbech and Doddington area.

BARRY, MICHAEL, M.D. N.U.I., M.R.C.P.I.: asst. chest physician, Ipswich area chest clinic.

EMBLETON, D. P. F., M.R.C.S.: senior registrar in chest medicine, Ipswich area chest clinic.

SMITH, C. C., M.B. Durh., D.M.R.D.: asst. radiologist, Peterborough and Stamford area.

SULLIVAN, T. J., M.B. Camb.: medical registrar, Peterborough Memorial Hospital.

Leeds Regional Hospital Board:

ARTHURTON, M. W., M.D. Lond., M.R.C.P., D.C.H.: consultant in pædiatrics, Dewsbury, Batley and Mirfield group.

HAWKINS, G. F., M.B. Edin., D.A.: consultant anæsthetist, thoracic surgical unit, Bradford Royal Infirmary.

HENRY, GERALD, M.B. N.U.I.: asst. chest physician, Scotton Banks Sanatorium, Knaresborough.

JAY, J. W. W., M.R.C.S.: asst. radiologist (S.H.M.O.), Bradford (A) and Keighley groups.

SZUMOWSKI, PIOTR, M.D. Cracow: deputy medical superintendent, The Hospital, Middleton-in-Wharfedale.

South East Regional Hospital Board, Scotland:

ABEL, W. J., M.B. Edin., M.R.C.P.E.: psychiatrist (S.H.M.O.), Bangour Mental Hospital, Broxburn, West Lothian.

LEITCH, L. GRANT, M.B. Edin., M.R.C.P.E.: pathologist, Cameron Hospital, nr. Leven, Fife.

MACCABE, A. F., M.D. Edin., D.P.H.: bacteriologist, Edinburgh northern group of hospitals.

ROSS, J. MCL., M.B.E., M.B. Edin., F.R.C.S.E.: asst. surgeon, Roodlands General Hospital, Haddington.

"Sweet is pleasure after pain"

Dryden's words might well describe the welcome relief from discomfort that 'SURFATHESIN' bestows on mucous surfaces or on injured skin. In abrasions and burns, as well as in irritant conditions involving the genito-urinary and rectal mucosa, a single application usually produces relief lasting for several hours. Repeated applications do not produce tolerance or sensitisation.

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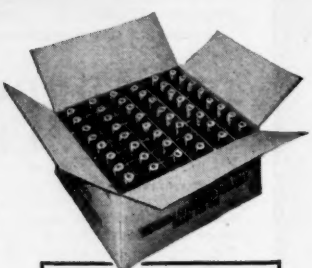

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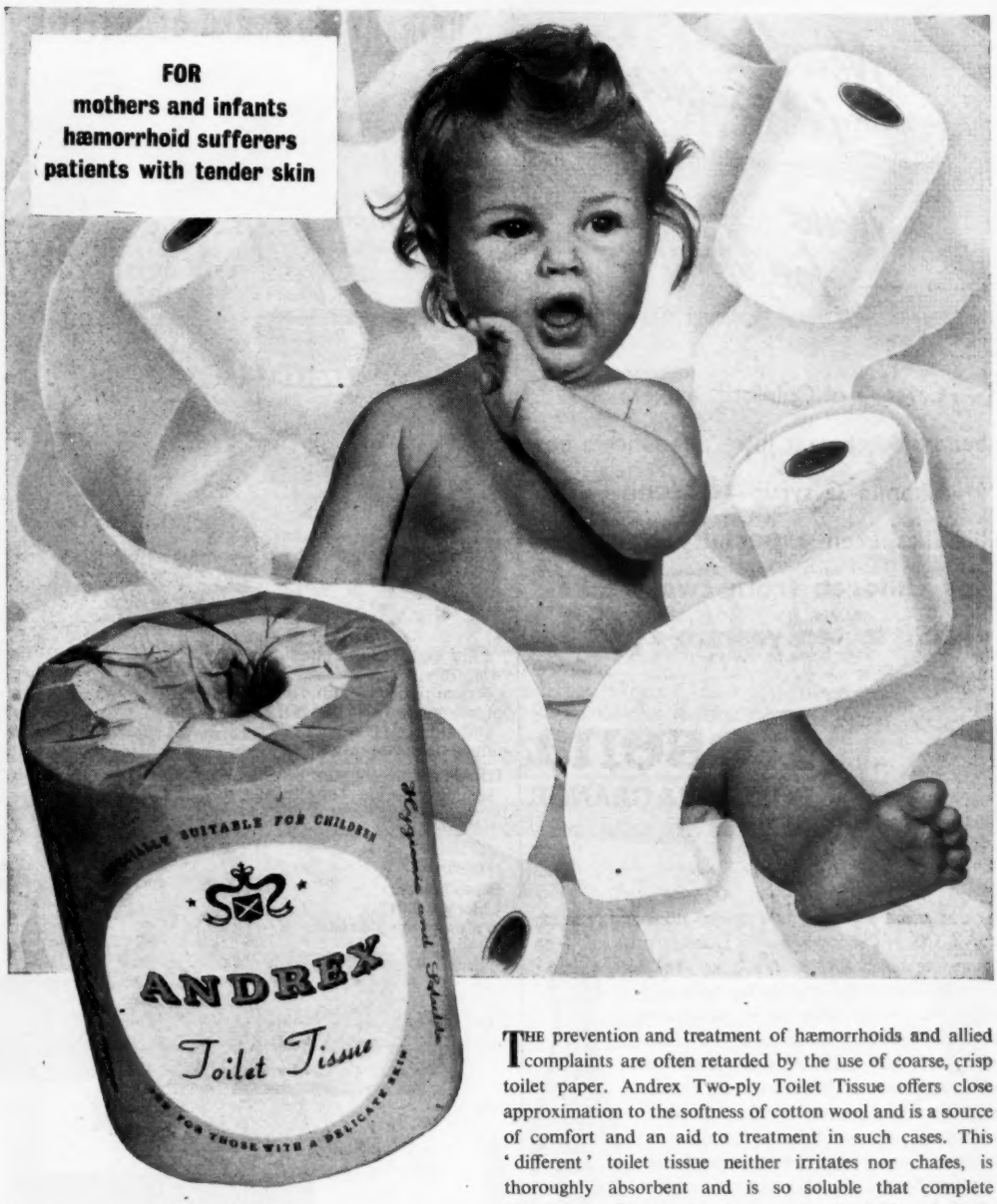

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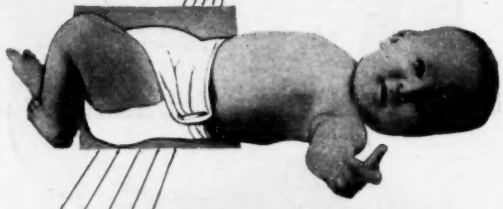

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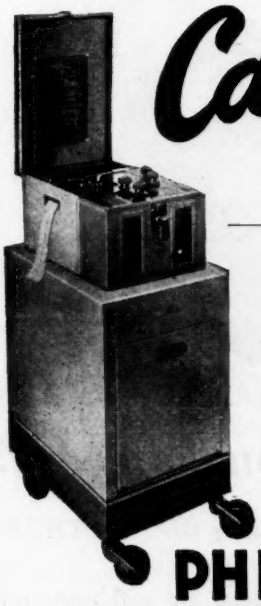

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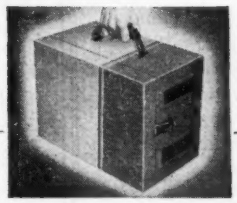

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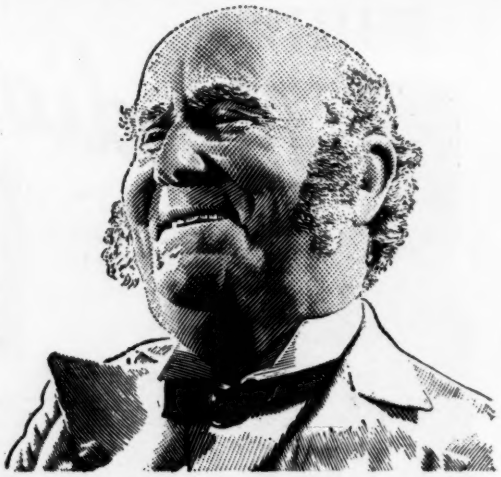

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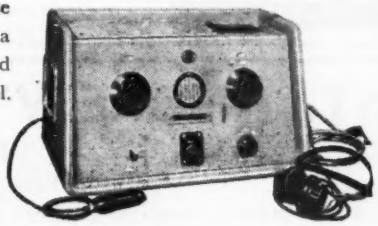

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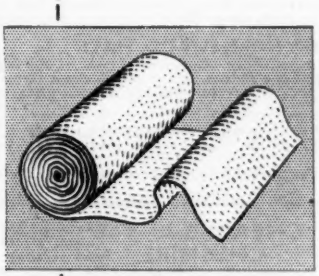

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Course of Demonstrations and Lectures in Anatomy, Applied Physiology and Pathology in their Application to Dental Surgery

11th January–5th March, 1954

12th July–1st October, 1954 (Excluding August)

Fee: £31 10 0

Full particulars may be obtained on application to:—

Mr. W. F. DAVIS, Secretary, Institute of Basic Medical Sciences, Royal College of Surgeons of England, Lincoln's Inn Fields, London, W.C.2 (Tel. HOLborn 3474).

London School of Hygiene and Tropical Medicine

(University of London)

Incorporating the Ross Institute

Diploma in Public Health

The Course of Study for the University of London Diploma covers a period of nine months whole-time work. The Course will commence on 28th September, 1953, and a certain number of places are reserved for candidates who wish to take Part I of the Course only (October to December). The fee is £73 10s. for the whole Course and £26 5s. for Part I only.

Diploma in Tropical Medicine and Hygiene (Eng.)

The Course of Study for the Conjoint Board's Diploma, which is held twice in each academic year, commencing next on 28th September, 1953, and on 22nd February, 1954, covers a period of five months whole-time work. The Course is recognised by the University of London as a course for Associate Students. The tuition fee is £42.

Diploma in Tropical Medicine and Hygiene (Lond.)

The Course of Study for the University of London Academic Postgraduate Certificate and Diploma in Tropical Medicine and Hygiene begins on 28th September, 1953, and covers a period of nine months whole-time study. Candidates are required to specialise in one of the following subjects at the final part of the course: Clinical Tropical Medicine; Medical Biology in relation to Tropical Medicine; Tropical Hygiene. The fee is £73 10s. for the whole Course and £42 for Part I only.

Diploma in Bacteriology

The Course for the University of London Diploma commences at approximately the beginning of October each year, and covers a period of nine months whole-time work. There are no vacancies for the session 1953–54.

Short Courses in the Principles of Medical Statistics, Epidemiology and Statistical Methods

Two four-months courses, both commencing in March each year, are given in Medical Statistics and Epidemiology; and in Statistical Methods and their application in Medicine.

These two courses are so arranged that they may be taken in conjunction. Fee for each course, 10 guineas. Fee for combined courses, 17 guineas.

Application for admission to Courses should be made to the Assistant Dean, London School of Hygiene and Tropical Medicine, Keppel Street (Gower Street), London, W.C.1 (MUSeum 3041).

UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL

TELEPHONE—EUSTON 5861

(UNIVERSITY OF LONDON), UNIVERSITY STREET, W.C.1

THE WINTER SESSION will commence on Tuesday, 6th October, 1953

THE SCHOOL IS FOR FINAL STUDIES only. STUDENTS are prepared for the degrees of the Universities of—OXFORD, CAMBRIDGE, LONDON, and for the Diplomas of other qualifying bodies.

FEES.—The fees for the complete Clinical Course are £180. The fees are payable, if desired, in three annual instalments of £60. There are no extras, as the fees include (i) Courses of Instruction in Pharmacy, Vaccination, and Fevers; (ii) Life subscription to the Medical Society; (iii) Subscription to the U.C.H. Magazine.

SCHOLARSHIPS, EXHIBITIONS and Prizes (value £3000) are awarded annually. Among the most important are :—

I. GOLDSMID ENTRANCE SCHOLARSHIPS, entitling the holder to the Final Course of Medical Study, are offered for competition annually in July, and are open to Students who are preparing for the Degrees of the Universities of London, Oxford, Cambridge, or other British Universities, or for the Diplomas of the Royal Colleges of Physicians and Surgeons.

II. GOLDSMID ENTRANCE EXHIBITION, entitling the holder to a reduction of £126 of the fees due for the Full Course of Final Medical Study.

III. FILLITER ENTRANCE SCHOLARSHIP IN PATHOLOGY, entitling the holder to a reduction of £123 of the fees due for the Full Course of Final Medical Study.

Candidates will be examined in any two of the following subjects: Anatomy, Physiology, General Pathology, and Bio-Chemistry. Candidates need take the examination in Pathology alone, if they desire to enter only for the Filliter Entrance Scholarship in Pathology.

All further information and Prospectus can be obtained from the Secretary, and the Dean can be interviewed at any time by appointment.

Dean—J. C. HAWKSLEY, C.B.E., Ph.D., M.D., F.R.C.P. *Vice-Dean*—PROF. S. J. COWELL, M.A., M.B., F.R.C.P.
Vice-Dean for Dental Students—ALAN SHEFFORD, O.B.E., F.D.S. R.C.S. Eng. *Secretary*—Maj.-Gen. H. L. BIRKS, C.B., D.S.O.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL

(UNIVERSITY OF LONDON) **ALBERT EMBANKMENT, S.E.1**

The HOSPITAL and SCHOOL occupy a unique position on the south bank of the Thames opposite the Houses of Parliament. The full curriculum is undertaken: all students, of whom a limited number are now women, must read for a University Degree.

PREMEDICAL and PRECLINICAL Students enter in October; CLINICAL Students from Oxford and Cambridge can enter in April or October.

A FINAL F.R.C.S. course is held twice a year.

There is an excellent Students' Club with squash courts, tennis court and swimming facilities and a spacious and well-equipped Athletic Ground at Cobham, Surrey, 45 minutes from the Hospital.

ENTRANCE SCHOLARSHIPS and UNIVERSITY SCHOLARSHIPS for students from Oxford and Cambridge are awarded annually.

PROSPECTUS and full particulars may be obtained from the Secretary, The Medical School, St. Thomas's Hospital, London, S.E.1.

ST. MARY'S HOSPITAL MEDICAL SCHOOL

(UNIVERSITY OF LONDON) **PADDINGTON, W.2**

The Medical School has modern buildings and is fully equipped. In addition to Laboratories, Class-rooms and Theatres, the buildings include a Library, Restaurant, Students' Common Rooms, Billiards Room, full-sized Swimming Bath, Squash Rackets Court, Gymnasium and Boxing Ring.

Complete courses of study are provided for the Medical Examinations of the University of London. Students from Oxford and Cambridge, who have completed their examinations in Anatomy and Physiology, are afforded facilities for the clinical part of the curriculum in order to take their Final Degrees. For clinical students there is a 3-months' Introductory Course and the Clinical Units wholly devote themselves to teaching and research. After qualification, there are a number of resident appointments open to students at St. Mary's.

Five Entrance Scholarships of £40 per year for 5 or 6 years are open to schoolboys on the nomination of Headmasters. The Geraldine Harmsworth Scholarship (£150), the Moran Scholarship, and two other University Scholarships of £50 a year for 3 years are open to members of Oxford and Cambridge Universities after passing the appropriate examinations in Anatomy and Physiology. All these Scholarships, which are eligible for supplementation by the Ministry of Education, are awarded by competitive interview in March, and application for the appropriate form should be made in January.

The School has an exceptionally fine ground of 13 acres at Teddington with a modern pavilion and facilities for all outdoor games.

A prospectus and application form for entry may be obtained from the Dean.

GUY'S HOSPITAL

MEDICAL AND DENTAL SCHOOLS

(UNIVERSITY OF LONDON.)

THE MEDICAL SCHOOL

Students are accepted for the course for the M.B., B.S. Degrees of the University of London and for the clinical course for the Medical Degrees of Oxford and Cambridge Universities.

The following Scholarships are offered:

A. *Open Entrance Scholarships.*

1. Two PRE-CLINICAL ENTRANCE SCHOLARSHIPS, each of the value of £40 per annum for the 5½ years Medical Course, awarded annually in March. In addition a WAR MEMORIAL SCHOLARSHIP of the same value is awarded in alternate years;
2. CLINICAL ENTRANCE SCHOLARSHIP and EXHIBITION.
   A War Memorial Scholarship, providing free Undergraduate Medical Education for a period of 3 years and an Exhibition of the value of £120, awarded annually in June or July.

B. *Confined Scholarships.*

1. A JUNIOR SCIENCE SCHOLARSHIP of the value of £100 is awarded on the Special First Examination for Medical Degrees of the University of London in July of each year and is confined to candidates who have attended the First M.B. classes at the School for one full academic year.
2. A SCHOLARSHIP entitling the holder to free Medical Education for the 5½ years Medical Course is awarded annually to a boy who has received his general education at Epsom College.

THE DENTAL SCHOOL

Students are accepted for the full course for the B.D.S. Degree of the University of London, for the second and subsequent years of the B.D.S. course, and for the remainder of the course for the L.D.S. Diploma after the Pre-Medical Examination has been passed.

The following Scholarships are offered:

A. *Open Entrance Scholarships.*

An ENTRANCE SCHOLARSHIP and a WAR MEMORIAL ENTRANCE SCHOLARSHIP each of the value of £50 per annum for the normal period of the student's course at the School, awarded annually in March.

B. *Confined Scholarships.*

1. A JUNIOR SCIENCE SCHOLARSHIP of the value of £100 is awarded on the Special First Examination for Medical Degrees of the University of London in July of each year and is confined to candidates who have attended the First M.B. classes at the School for one full academic year.
2. A SCHOLARSHIP entitling the holder to free dental education for the normal period of the student's course at the School is awarded annually to a boy who has received his general education at Epsom College.
3. A JUBILEE SCHOLARSHIP of the value of £50 per annum for the normal period of the student's course at the School, restricted to the sons and daughters of Guy's graduates, nurses and teachers.

Numerous Prizes, Medals, and Scholarships are open for competition during the period of Studentship.

For further particulars of Scholarships and for the Prospectus containing information as to the Course of Study, Fees, &c., application should be made to: *The Dean, Guy's Hospital Medical School, London Bridge, S.E.*1.

ROYAL FREE HOSPITAL SCHOOL OF MEDICINE

(University of London)

HUNTER ST., BRUNSWICK SQ., LONDON, W.C.1

KATHARINE G. LLOYD-WILLIAMS, M.D., F.F.A.R.C.S., Dean

Full Courses are arranged for the Medical Degrees of the University of London.

Clinical teaching takes place in the five hospitals of the Royal Free Hospital Teaching Group, with a total of approximately 950 beds. House posts in all five hospitals are open to students upon qualification.

Scholarships, Bursaries, and Prizes of the value of £4000 are awarded annually.

The Session begins in October of each year. Application for admission should be made to the Warden and Secretary, from whom an application form, prospectus and full information can be obtained.

THE ROYAL LONDON HOMŒOPATHIC HOSPITAL

Great Ormond Street and Queen Square, London, W.C.1

Courses of Instruction in the **Principles and Practice of Homœopathy** for Medical Practitioners and Senior Students of Medicine.

These lectures, which are given under the auspices of The Homœopathic Research and Educational Trust, deal with the subjects required for examination for the Diploma of Membership of The Faculty of Homœopathy.

The Complete Course, which comprises three Sessions, commences on 9th October, 1953, and is preceded by an introductory lecture at the Hospital on 8th October at 5.30 p.m. by

D. M. CAMERON,
M.B., Ch.B. Glas., M.F. HOM.

The subjects dealt with throughout the course are:

Homœopathic Philosophy and Prescribing

Homœopathic Materia Medica and Therapeutics

The Study of the Repertory

combined with Clinical Tutorials.

Fee for registered medical practitioners £10 10s. per session, medical students admitted without charge.

Full particulars can be obtained on application to the Dean of The Educational Course at the Hospital.

THE ROYAL DENTAL HOSPITAL OF LONDON School of Dental Surgery

(University of London)

LEICESTER SQUARE, LONDON, W.C.2

Men and Women Students may be admitted for the curriculum for the B.D.S. Degree and the L.D.S. Diploma in October and January.

HOSPITAL PRACTICE.

The School is furnished with modern equipment, and the Clinic of the Hospital is unrivalled. Clinical instruction is given by the Surgeon of the day. Special instruction is given in Advanced Operative Technique, Orthodontics, Pathology and Radiology. There is a well-equipped Department of Clinical Photography and Visual Education.

DENTAL PROSTHETICS.

The Prosthetics Department has been recently re-equipped and the teaching staff strengthened in all branches.

HOUSE APPOINTMENTS.

Six Senior House Surgeons and eighteen ordinary House Surgeons are appointed every year.

SCHOLARSHIPS.

Numerous Scholarships, Bursaries and Prizes are awarded annually, including an open Entrance Scholarship of £100.

Applications for further particulars and Calendar should be submitted to THE SCHOOL SECRETARY.

THE MEDICAL COLLEGE OF ST. BARTHOLOMEW'S HOSPITAL

(UNIVERSITY OF LONDON)

WINTER SESSION begins October 1st, 1953

The **pre-clinical** Departments are established in the Charterhouse Square portion of the Medical College where much of the War Damage has been repaired and reconstructed.

The **clinical** work of the senior students is carried on at St. Bartholomew's Hospital. Adequate facilities are available for instruction in Midwifery.

STUDENTS' UNION

The Union possesses a Club Ground of seventeen acres at Chislehurst.

HIGHER EXAMINATIONS

Special Classes are held for **F.R.C.S.**, etc.
For further particulars apply, personally or by letter, to—
THE DEAN OF THE MEDICAL COLLEGE,
ST. BARTHOLOMEW'S HOSPITAL, LONDON, E.C.1

THE MIDDLESEX HOSPITAL MEDICAL SCHOOL

(UNIVERSITY OF LONDON)

The Hospital and Medical School are fully equipped for teaching the entire medical curriculum.

SCHOLARSHIPS AND PRIZES

Two ENTRANCE SCHOLARSHIPS, value £100 each, and Four UNIVERSITY SCHOLARSHIPS, value £100 each, are awarded annually. In addition numerous Prizes are also awarded each year and exceed £1000 in value.

The Tutors assist all Students, especially those who are preparing for Examinations, without extra fee.

Special attention is given to Students studying for Higher Degrees and Diplomas.

Common Rooms and a Restaurant are provided in the School Buildings. A Squash Racquets Court is available.

Athletic Ground: Chislehurst, Kent.

The Students' Amalgamated Clubs include Rugby and Association Football, Golf, Cricket, Hockey, Sailing, Fencing, etc., etc.

SESSIONS 1953-54

Classes begin on the 5TH OCTOBER. Clinical Appointments are made every three months, beginning on the 1st October, and are held at the Middlesex Hospital, and Central Middlesex Hospital, Acton, N.W.

Further particulars, Scholarship Regulations, and detailed Prospectus may be obtained on application to the Medical School Secretary, Middlesex Hospital, W.1.

SIR HAROLD BOLDERO, M.A., D.M., F.R.C.P., Dean of the Medical School.

INSTITUTE OF PSYCHO-ANALYSIS

The Institute provides systematic training in the theory and practice of Psycho-Analysis. The course, which is compatible with employment in the London area, lasts approximately four years and comprises a personal analysis, clinical work under supervision and lectures and seminars.

For prospectus and further information application should be made to the Training Secretary, The Institute of Psycho-Analysis, 63, New Cavendish Street, London, W.1.

INSTITUTE OF PSYCHIATRY

(University of London)
(The Bethlem Royal Hospital and the Maudsley Hospital)
at
The Maudsley Hospital,
Denmark Hill, London, S.E.5.

The Institute, which is in the British Postgraduate Medical Federation, provides courses of instruction covering up to three years for postgraduate students who wish to specialise in psychiatry or prepare for the Academic Postgraduate Diploma in Psychological Medicine of the University of London or the Diploma in Psychological Medicine of the Conjoint Board. The subjects covered include anatomy and biochemistry of the nervous system, neurophysiology, pathology of nervous and mental diseases, psychiatry of children and adults, delinquency, principles of psychotherapy, forensic psychiatry and criminology, psychology, mental testing and statistics. Clinical training is available throughout the year. There is a special six months' course in child psychiatry. Selected students are eligible for appointments as house officer and registrar at the Bethlem Royal Hospital and the Maudsley Hospital.

Facilities for research and supervision of study for higher degrees can be provided in clinical work and in the biochemical, physiological, neuro-endocrinological, neuropathological, and psychological laboratories.

A course for Honours Graduates in Psychology is available in clinical psychology for the Academic Postgraduate Diploma in Psychology. In conjunction with the Institute of Neurology, a course in the techniques of electroencephalography is provided for doctors who expect to take up electro-encephalographic appointments in hospitals.

Further information may be obtained from the Dean, Institute of Psychiatry, Maudsley Hospital, Denmark Hill, London, S.E.5.

BRITISH POSTGRADUATE MEDICAL FEDERATION
(UNIVERSITY OF LONDON)

THE INSTITUTE OF LARYNGOLOGY AND OTOLOGY

330/332, Gray's Inn Road, London, W.C.1
IN ASSOCIATION WITH
THE ROYAL NATIONAL THROAT, NOSE AND EAR HOSPITAL

The Institute is organised to provide instruction in this Speciality for the whole of the period of training necessary to reach full consultant standard. There are ample clinical and research facilities and teaching is carried on continuously daily throughout the year.

There are full-time comprehensive courses of lectures and demonstrations for period of 8 months commencing in February and September each year which cover the whole field of the Speciality, including the basic sciences, and will be found to be suitable for those intending to take the D.L.O. (R.C.P. & S. Eng.).

There is also an advanced revision course (part-time) for 10 to 12 weeks twice yearly, suitable for students preparing for the final examinations in otolaryngology for the M.S. (London) and the F.R.C.S. (England & Edinburgh).

An intensive course in Endoscopy (with practical work) is held twice yearly for senior students.

A number of paid appointments, which are open to postgraduate students in the different stages of training, give opportunities of clinical experience and research.

Further information may be obtained from the Dean.

INSTITUTE OF NEUROLOGY

(QUEEN SQUARE)

LONDON, W.C.1

(University of London—British Postgraduate Medical Federation)
Associated with: The National Hospital, Queen Square, and the Maida Vale Hospital for Nervous Diseases, Maida Vale

THE Institute provides postgraduate training in the various departments of Neurology.

THE OUT-PATIENT PRACTICE is open at 10 o'clock at QUEEN SQUARE every day (except Saturday). A fee of **£2 2s.** per month is charged for attending the Out-Patient Department only.

THE IN-PATIENT PRACTICE at QUEEN SQUARE and MAIDA VALE is open at 10 o'clock, and a limited number of Clinical Clerks are appointed at both Hospitals. Fees: three months, **15 gns.**; six months, **28 gns.**

Special courses of instruction are given during the summer, autumn and winter terms, and Clinical Demonstrations are given on Wednesday afternoons and Saturday mornings as advertised in the Medical Journals.

Application should be made to the Dean at the Institute.

MACDONALD CRITCHLEY.

THE SOCIETY OF CHIROPODISTS

LIMITED (By Guarantee) **21, CAVENDISH SQUARE, LONDON, W.1**

The Society is a member of the Board of Registration of Medical Auxiliaries.

Its diploma is accepted by the Medical Profession as evidence of scientific knowledge and thorough practical training. The designatory letters are F.Ch.S. (Fellow), M.Ch.S. (Member), and A.Ch.S. (Associate).

The course of instruction covers the whole sphere of the theory and practice of Chiropody, and includes tuition in Anatomy, Physiology, Medicine, and Surgery in so far as these have a bearing on Chiropody. All lectures on Medical subjects are given by members of the Medical Profession and certain of the lectures are given in the Universities and Medical Schools of the cities where these Schools are situate. The training occupies three years, and may be taken at any one of the following Schools, which are recognised by the Society:

Chelsea School of Chiropody,
Chelsea Polytechnic,
Manresa Road,
London, S.W.3.

London Foot Hospital School of Chiropody,
33 Fitzroy Square,
London, W.1.

London School of Chiropody,
299 Kilburn High Road,
London, N.W.6.

Birmingham General Dispensary School of Chiropody
41 Newhall Street,
Birmingham, 3.

Manchester School of Chiropody,
Anson Road,
Victoria Park, Manchester, 14.

Royal Technical College, School of Chiropody,
28 and 29 The Crescent,
Salford, 5.

Edinburgh School of Chiropody,
81 Newington Road, Edinburgh.

Glasgow and West of Scotland College of Chiropody,
22 Windsor Terrace,
Glasgow, N.W.

Glasgow Southern Foot Hospital,
44 Cumberland Street,
Glasgow, C.5.

These Schools are attached to Foot Clinics where Students are afforded opportunities of seeing and treating those varied types of foot trouble which come within the province of the Chiropodist.

The Examinations in Anatomy, Physiology, Medicine, and Surgery are conducted by members of the Medical Profession from a panel approved by the Royal College of Physicians and Royal College of Surgeons of England respectively.

Further particulars may be obtained from the Secretary, L. W. Griffiths, F.A.C.C.A., A.C.I.S., or direct from any of the Schools referred to above.

INSTITUTE OF UROLOGY

in association with

ST. PETER'S, ST. PAUL'S AND ST. PHILIP'S HOSPITALS

POSTGRADUATE COURSES OF UROLOGICAL INSTRUCTION

"Weekend Courses of Lectures and Demonstrations" beginning on Friday afternoon (operating-sessions) and ending on Sunday about tea time:

About once a month, as advertised.

Alternately — { "Essentials of Urology" / "Advanced Urology"

Fees for each course — £5 5s. 0d.

Weekly Lectures:

October 1953—March 1954.

Day: Wednesday. Time: 5 p.m. No fee.

Guest Lecturers:

Twice a year at the Royal College of Surgeons.

The practice of the hospitals, including the use of the Institute museum, reading-room and library, is open to students attending the courses.

Applications should be made to the Secretary, Institute of Urology, 10, Henrietta-street, Covent Garden, W.C.2.

UNIVERSITY OF BRISTOL

FACULTY OF MEDICINE

The University grants the Degrees of Bachelor of Medicine and Surgery (M.B., Ch.B.), Master of Surgery (Ch.M.), Doctor of Medicine (M.D.), Bachelor of Dental Surgery (B.D.S.), Master of Dental Surgery (M.D.S.), and Bachelor of Veterinary Science (B.V.Sc.), as well as diplomas in Public Health (D.P.H.), Psychological Medicine (D.P.M.), and Dental Surgery (L.D.S.) and a Midwife Teacher's Certificate, and holds a Training Course for Health Visitors.

For particulars apply to the Registrar, The University, Bristol, 8.

THE UNIVERSITY OF SHEFFIELD

FACULTY OF MEDICINE

Dean—J. G. McCRIE, O.B.E., T.D., M.B., F.R.C.P.Ed.

The University grants Degrees in Medicine (M.B., Ch.B., M.D., Ch.M.) and in Dental Surgery (B.D.S., M.D.S.). It also grants a Diploma in Dental Surgery (L.D.S.) and a Diploma in Microbiology (Dip. Microbiol.). These are all open to men and women on equal terms.

The Session 1953–54 begins on October 5th.

Lectures and laboratory courses are given in the University, whilst clinical instruction is provided in the general and special Hospitals in the City.

A number of resident hospital appointments are open to qualified students of the School, both male and female.

HALLS OF RESIDENCE.—FOR MEN: Crewe Hall, Clarkehouse Road, Sheffield, 10; Ranmoor House, Fulwood Road, Sheffield, 10; Stephenson Hall, Oakholme Road, Sheffield, 10.

FOR WOMEN: University Hall for Women, Endcliffe Vale Road, Sheffield, 10, and annexes.

Particulars of the Halls may be obtained from the Wardens.

SCHOLARSHIPS.—A number of Entrance Scholarships are open to students wishing to enter the Faculty of Medicine. There are also Post-Graduate scholarships.

Entries to the Medical and Dental Schools are strictly limited in order to ensure adequate lecture and laboratory accommodation for all students. The relatively ample number of hospital beds available renders the facilities for clinical instruction unusually large.

Prospectuses containing details of the Medical and Dental Schools may be obtained, respectively, from the Dean of the Faculty of Medicine and the Director of Dental Studies; and one giving particulars of Scholarships from the undersigned.

A. W. CHAPMAN, Registrar.

THE UNIVERSITY OF LEEDS

DENTAL SCHOOL AND HOSPITAL

Warden: PROFESSOR T. TALMAGE READ, F.R.F.P.S., F.D.S.R.C.S., L.R.C.P.

The First Term begins on **October 6th, 1953.**

The degrees of B.Ch.D. and M.Ch.D., as well as a diploma, L.D.S., are conferred by the University.

The first year studies are taken in the Science Departments of the University and a complete professional education is provided by the Dental School and Hospital, the Medical School and the General Infirmary at Leeds.

For prospectus and further information, application should be made to:

The Warden, Dental School and Hospital, Leeds, 1.

UNIVERSITY OF WALES

THE WELSH NATIONAL SCHOOL OF MEDICINE, CARDIFF

Courses of Instruction for Medical Degrees and Diplomas

Courses of Instruction are conducted for Medical Degrees (M.B., B.Ch.) of the University of Wales.

N.B.—*Application for admission must be made between 1st October and 15th December in the year immediately preceding that in which admission is sought.*

FEES. The Composition fee for the pre-medical year is £35, and for each subsequent year £45. The approximate total cost of the six years' course is £400, including Incidental Fees, Students' Societies Fees, and the Examination Fees of the University of Wales. Certain Scholarships, &c., are available.

POSTGRADUATE STUDY. Facilities are provided for approved research. Postgraduate Scholarships are available ranging in value from £150 to £250 per annum.

Complete Postgraduate Courses of Instruction are conducted in Radiology and for the Certificate in Public Health (C.P.H.), Diploma in Public Health (D.P.H.), and for the Tuberculous Diseases Diploma (T.D.D.) of the University of Wales. A short course on Tuberculosis and Diseases of the Chest is also conducted. Postgraduate Courses for Practitioners are arranged.

Application for admission to any of the Courses should be made to the PROVOST, The Welsh National School of Medicine, 34, Newport Road, Cardiff, from whom further particulars may be obtained.

THE QUEEN'S UNIVERSITY *of* BELFAST

FACULTY OF MEDICINE, 1953-54

Dean: Professor J. H. Biggart, C.B.E., M.D., D.Sc.

The University offers the primary degrees of Bachelor of Medicine (M.B.), Bachelor of Surgery (B.Ch.), and Bachelor of Obstetrics (B.A.O.), which are conferred at the same time and after the same course of study extending over a period of not less than five academic years.

The following higher degrees are offered to graduates of the University—Doctor of Medicine (M.D.), Master of Surgery (M.Ch.), and Master of Obstetrics (M.A.O.). These degrees may be conferred after an examination, or on the approval of a thesis with an examination.

The University offers a Certificate and a Diploma in Public Health.

The Licence in Dental Surgery (L.D.S.), the Bachelorship and Mastership of Dental Surgery (B.D.S.) and (M.D.S.) may be conferred on candidates who have attended and passed examinations in courses appropriate to Dental students.

The Lectures in Michaelmas Term, 1953–54, begin on Tuesday, 13th October, 1953. The total fees amount to approximately £465. Entrance scholarship examinations are held in June yearly. A number of undergraduate scholarships are awarded on the results of professional examinations.

HOSPITALS RECOGNISED FOR CLINICAL INSTRUCTION

BENN EYE, EAR AND THROAT HOSPITAL (54), CITY HOSPITAL (1653), MATER INFIRMORUM HOSPITAL (195), NORTHERN IRELAND FEVER HOSPITAL, PURDYSBURN (390), OPHTHALMIC HOSPITAL (30), PURDYSBURN HOSPITAL FOR MENTAL DISEASES, ROYAL BELFAST HOSPITAL FOR SICK CHILDREN (114), ROYAL MATERNITY HOSPITAL (96), ROYAL VICTORIA HOSPITAL (554), SAMARITAN HOSPITAL (54), ULSTER HOSPITAL FOR DISEASES OF CHILDREN AND WOMEN (100).

(The figures indicate the number of clinical beds available.)

Further information about admission, scholarships and the faculty, can be obtained from the following publications:—

Entrance Regulations, price 9d.; Scholarship Regulations, price 9d.; Regulations for the School of Dentistry, price 9d.; and Regulations for the Faculty of Medicine, price 1/-, obtainable from the Bursar.

G. R. COWIE, M.A., LL.B., Secretary.

UNIVERSITY OF DUBLIN

SCHOOL OF PHYSIC, TRINITY COLLEGE

The SESSION will begin on 13th October, 1953.

Information regarding Courses for the Medical and Dental Degrees and for the Diploma in Gynæcology and Obstetrics may be obtained on application to the REGISTRAR of the School of Physic, Trinity College, Dublin.

UNIVERSITY OF ST. ANDREWS

Chancellor—His Grace THE DUKE OF HAMILTON, P.C., G.C.V.O., A.F.C., LL.D., F.R.G.S.

Rector—THE EARL OF CRAWFORD AND BALCARRES, G.B.E., LL.D., Litt.D., D.C.L., F.R.I.B.A.

Vice-Chancellor and Principal—(Vacant).

The UNIVERSITY OF ST. ANDREWS includes the UNITED COLLEGE OF ST. SALVATOR AND ST. LEONARD AND ST. MARY'S COLLEGE IN ST. ANDREWS, UNIVERSITY COLLEGE, DUNDEE, THE ADVANCED MEDICAL SCHOOL IN DUNDEE AND THE DUNDEE DENTAL SCHOOL.

FACULTY OF MEDICINE

Dean and Adviser of Studies at Dundee—Professor WILLIAM JOHN TULLOCH, M.D.

Adviser of Studies at St. Andrews—Professor ROBERT WALMSLEY, M.D.

The University confers the following DEGREES AND DIPLOMAS:—M.B., Ch.B., M.D., Ch.M., Ph.D., D.P.H. (all open to men or women).

Application for admission as a medical student should reach the Dean not later than 30th June in any year.

SESSION 1953-54 commences on 6th OCTOBER, 1953. The whole curriculum may be taken at Dundee, or the first 2 years and 2 terms may be taken in St. Andrews and the remainder in Dundee.

CLINICAL INSTRUCTION.—Ample facilities at Dundee Royal Infirmary (510 beds), Maryfield Hospital (360 beds), King's Cross Hospital (270 beds), Ashludie Hospital (220 beds), Dundee Mental Hospital (700 beds), Dundee Eye Institution, Dental Hospital, and other Medical and Surgical Institutions in Dundee.

HOSPITAL APPOINTMENTS.—Numerous resident hospital appointments are available in the above institutions.

RESIDENCE HALLS.—For Men and for Women in St. Andrews and Dundee. The William Low Residence for Medical Students at Dundee is available for students during Clinical study.

STUDENTS' UNIONS.—Athletic Grounds and Gymnasia in St. Andrews and in Dundee.

BURSARY (SCHOLARSHIP) COMPETITIONS.—*For Dundee:* entry 12th April; Examinations May. *For St. Andrews:* entry 15th February; Examinations March.

BURSARIES EXCLUSIVELY FOR MEDICAL STUDENTS.—*At St. Andrews:* Taylour Thomson (for women), three of £40 for 6 years; Malcolm (for men or women), £40 for 5 years, vacant annually. *At Dundee:* Hepburn (for men or women), £25 for 3 years.

BURSARIES FOR WHICH MEDICAL STUDENTS ARE ELIGIBLE.—*At St. Andrews:* About ten Bursaries ranging in value from £60 to £20, tenable for 3 or 4 years, vacant annually. *At Dundee:* Nine Entrance Bursaries of from £50 to £40 for 3 years, and four Bursaries of from £30 to £25 for allocation in the remaining years of the course.

RESIDENTIAL ENTRANCE SCHOLARSHIPS FOR MEN.—*At St. Andrews:* Seven or eight of £100 competed for annually in March. Medical students are eligible.

PRELIMINARY EXAMINATION.—August and March. Entries 10th July and 1st February.

Fees for complete M.B., Ch.B. Course, exclusive of Examination Fees, Hospital Fees, &c., £232 2s.

PROVISION FOR POSTGRADUATE STUDY AND RESEARCH. Postgraduate Scholarships of £300 p.a. for 1 or 2 years available to graduates in all Faculties including Medicine.

Full information may be obtained from the SECRETARY OF THE UNIVERSITY, 71, North-street, St. Andrews, or the DEAN OF THE FACULTY OF MEDICINE, Medical School, Dundee.

SCHOOL OF DENTISTRY

Adviser of Studies—Professor A. D. HITCHIN, M.D.S.

The University confers the DEGREES of B.D.S., M.D.S., D.D.Sc., and Ph.D. and the DIPLOMA IN PUBLIC DENTISTRY.

Full facilities for instruction are available in the Scientific Departments of the University, the Advanced Medical School, and Medical and Surgical Institutions.

The Dental Hospital is fully equipped for the training of Students in Mechanical, Prosthetic, and Operative Dentistry.

Financial assistance is available for students.

Full information may be obtained from the ADVISER OF STUDIES, DENTAL HOSPITAL, DUNDEE.

The University, St. Andrews, June, 1953.

MONTESSORI INTERNATIONAL TRAINING COURSES IN CHILD EDUCATION

under the personal direction of

Mr. MARIO MONTESSORI

DIPLOMA COURSE: 28TH SEPTEMBER, 1953–31ST MARCH, 1954

SHORT COURSE: 28TH SEPTEMBER, 1953–31ST DECEMBER, 1953

specially for parents, nurses, &c.

Both Courses will consist of 3 evening sessions a week, also Saturday mornings.

For Prospectus apply to the Organiser, Montessori Courses, 14, Gordon-square, London, W.C.1. Telephone: EUSton 8803.

UNIVERSITY OF EDINBURGH

FACULTY OF MEDICINE

The University grants the Degrees of Bachelor of Medicine and Bachelor of Surgery (M.B., Ch.B.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.), Bachelor of Dental Surgery (B.D.S.), Master of Dental Surgery (M.D.S.), Bachelor of Veterinary Medicine and Surgery (B.V.M.S.), and Doctor of Veterinary Medicine and Surgery (D.V.M.S.).

The approximate cost of the 6 years course, for the Degrees of M.B. Ch.B., is £310. The curriculum for the Degree of B.D.S. is of 5 years duration, and the approximate cost is £285. The course for the Degree of B.V.M.S. extends over five years; the approximate cost being £295. Prospective students are normally required to make application to the Dean of the Faculty of Medicine, on a prescribed form, not later than 1st July of the year in which they wish to enter the Faculty.

The University grants Diplomas in Public Health, Medical Radiodiagnosis, Medical Radiotherapy, and Tropical Medicine and Hygiene, and full courses of instruction for the Diplomas are provided.

A Sister-Tutor Certificate is granted in conjunction with the Royal College of Nursing. Inquiries regarding the course should be addressed to the Secretary, Royal College of Nursing, Scottish Board, 44, Heriot-row, Edinburgh, 3.

A Certificate in Medical Illustration, the course for which extends over a period of 3 years, is given. The course is suitable for persons who desire to take up medical illustration as a profession. Prospective students are invited to submit their application as soon as possible.

In the various Departments of the Faculty of Medicine provision is made for research by students of graduate standing.

A copy of the Faculty Programme may be obtained from the Dean of the Faculty of Medicine, University, Teviot Row, Edinburgh, 8. Programmes regarding Degrees in other Faculties may be obtained from the Matriculation Office, University, South Bridge, Edinburgh, 8.

CHARLES H. STEWART, Secretary to the University.

MASTERY OF MIDWIFERY

OF THE SOCIETY OF APOTHECARIES OF LONDON

(M.M.S.A.)

The Mastery of Midwifery is designed to give evidence of intensive study and practical experience in **Ante-Natal Care, Midwifery, and Infant Welfare** and their relation to **Hygiene and Preventive Medicine.**

The Examination, which is Written, Oral and Clinical, is held in May and November.

Regulations and forms of application for admission to the examinations may be obtained from:—

THE REGISTRAR
THE SOCIETY OF APOTHECARIES
BLACK FRIARS LANE, E.C.4

THE ROYAL LONDON HOMŒOPATHIC HOSPITAL
Great Ormond-street and Queen-square, W.C.1

A short COURSE OF INSTRUCTION IN HOMŒOPATHIC THERAPEUTICS for medical practitioners and senior students of medicine will be held at the Hospital daily 28TH SEPTEMBER–1ST OCTOBER inclusive, commencing at 9.30 A.M.

The theme of the course will be "How to take the case" and will include lectures and clinical demonstrations.

No admission cards will be issued or fee charged, but those wishing to attend should write to the Hospital to the Dean of the Educational Course, who will be pleased to supply full particulars.

BRITISH POSTGRADUATE MEDICAL FEDERATION
UNIVERSITY OF LONDON

THE SCIENTIFIC BASIS OF MEDICINE
1953–1954

FIRST TERM: OCTOBER–DECEMBER, 1953

The following Lectures, which are designed especially for research workers and specialists in training, will be delivered at The London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1, on Tuesday and Thursday afternoons at 5.30 P.M. during the first term of the session 1953–54. Admission free without ticket.

Date	*Lecturer*	*Title*
October:		
Thurs., 8th	Sir HENRY DALE, O.M., G.B.E., F.R.C.P., F.R.S.	Scientific Method in Medical Research
(In the Beveridge Hall, Senate House, University of London, W.C.1.)		
Tues., 13th	Prof. R. W. RUSSELL, M.A., PH.D. (University College, London)	Experimental Psychopathology
Thurs., 15th	Dr. C. J. POPJAK, M.D. (M.R.C., Mill Hill)	Biological Synthesis
Tues., 20th	Prof. J. H. BURN, M.A., F.R.S. (Oxford)	Acetylcholine and Cholinesterase in Heart Muscle
Thurs., 22nd	Prof. F. G. YOUNG, M.A., D.SC., F.R.I.C., F.R.S. (Cambridge)	Growth Hormone of the Anterior Pituitary Gland
November:		
Tues., 3rd	Prof. E. J. KING, M.A., D.SC., PH.D., F.R.I.C. (Postgraduate Medical School of London)	Alkaline and Acid Phosphatases
Thurs., 5th	Dr. P. M. F. BISHOP, B.A., D.M., M.R.C.P. (Institute of Obstetrics and Gynæcology)	The Physiological Action of Sex Hormones
Tues., 10th	Prof. E. C. AMOROSO, B.SC., M.B., B.CH., PH.D. (Royal Veterinary College and Hospital)	The Biology of the Fœtal Membranes and the Placenta
November (Contd):		
Thurs., 12th	Dr. R. L. M. SYNGE, F.R.S. (Rowett Research Institute, Aberdeen)	Principles of Chromatography
Tues., 17th	Prof. W. T. ASTBURY, M.A., SC.D., F.R.S. (Leeds)	Some Recent Ideas about the Proteins and other Biological Macromolecules
Thurs., 19th	Prof. G. W. HARRIS, SC.D., M.D., F.R.S. (Institute of Psychiatry)	Stress and Thyroid Activity
Tues., 24th	Prof. H. L. SHEEHAN, D.SC., M.D., F.R.C.P., F.R.C.O.G. (Liverpool)	The Vascular Lesions of Pituitary Necrosis
Thurs., 26th	Dr. H. E. SIGERIST, M.D., LL.B., D.LITT. (Yale, U.S.A.)	Science and History
December:		
Tues., 1st	Dr. W. D. M. PATON, M.A., D.M. (University College Hospital Medical School)	Anti-cholinesterases
Thurs., 3rd	Dr. R. M. B. MACKENNA, M.A., M.D., F.R.C.P. (Institute of Dermatology)	The Scientific Approach to Dermatology

The second part of this series will commence on Thursday, 14th January, 1954.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

COURT OF EXAMINERS

Notice is hereby given that the Council on 10TH DECEMBER, 1953, will elect 2 Members of the Court of Examiners. The Examiners retiring in rotation are Professor F. A. R. Stammers, C.B.E., T.D., and Mr. Ralph Marnham, who are applying for re-election.

Fellows of the College desirous of becoming candidates for the office must make application, in writing, to the Secretary on or before 29th September, 1953.

KENNEDY CASSELS, Secretary.

Lincoln's Inn-fields, London, W.C.2.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

KIRK DUNCANSON FELLOWSHIP FOR MEDICAL RESEARCH

The Council of the Royal College of Physicians of Edinburgh will award a Kirk Duncanson Research Fellowship of the value of £600 a year and tenable for a period of 2 years.

Applicants, who should state the nature of the proposed research and the place where it is intended to carry it out, must send their applications before 1st October to the Secretary.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

The EXAMINATIONS for the LICENCE of the College (as a single qualification) for the ensuing year will be held on the FIRST WEDNESDAY and the following days of every month (except September and October).

Candidates must possess a qualification approved by the council. Applications must be lodged with the Secretary one fortnight before the date of the Examination at which they propose to appear.

The EXAMINATIONS for the MEMBERSHIP of the College are held quarterly during the FIRST WEEK of JANUARY, APRIL, JULY, and OCTOBER.

Candidates for the MEMBERSHIP must submit their applications and testimonials to the Secretary one month before the date at which they wish to appear for Examination.

For the Regulations in regard to the various qualifications granted by the College, and all other information, application may be made to the Secretary.

THE ROYAL INSTITUTE OF PUBLIC HEALTH AND HYGIENE

THE CERTIFICATE, AND THE DIPLOMA, IN PUBLIC HEALTH, AND THE DIPLOMA IN INDUSTRIAL HEALTH

The next bi-annual Course of Instruction for the Certificate in Public Health (C.P.H.) will commence on 2ND OCTOBER, 1953. This leads to Courses both for the Diploma in Public Health and for the Diploma in Industrial Health. All Courses may be taken either whole time or part time.

Prospectuses, enrolment forms and full details may be obtained from the Secretary, 28, Portland-place, London, W.1. (Telephone: LANgham 2731/2.)

UNIVERSITY OF GLASGOW

POSTGRADUATE MEDICAL EDUCATION COMMITTEE

COURSE IN MENTAL DEFICIENCY

If there is a sufficient demand, a short intensive postgraduate Course in Mental Deficiency will be held from 12TH OCTOBER to 30TH OCTOBER, 1953.

The Course will comprise:

(*a*) Lectures and demonstrations in various aspects of mental handicap and mental deficiency.
(*b*) Instruction in mental testing.
(*c*) Visits to Institutions.

Fee: 15 guineas.

The Course will be limited to 20 practitioners, places being allocated in order of return of application forms which may be obtained from the Director of Postgraduate Medical Education, The University, Glasgow, W.2.

COURSE IN POLIOMYELITIS

at the

INSTITUTE OF ORTHOPÆDICS

5TH–10TH OCTOBER, 1953

5th October Town Section	Public Health aspects	Dr. C. H. LACK
	Laboratory aspects	Dr. F. SANDERS
	The Pathological Anatomy of Poliomyelitis and its bearing on clinical features, including prognosis and recovery	Dr. H. A. SISSONS and Mr. W. J. SHARRARD
6th October Country Section	Treatment in convalescent phase: muscle charts: electrical examination	Mr. D. M. BROOKS and Miss PRIOR
	Respiratory and bulbar paralysis	Dr. A. B. KINNIER WILSON and Dr. F. H. STEVENSON
7th October Country Section, A.M.	Reconstructive surgery	Mr. J. A. CHOLMELEY
Garston Manor, P.M.	Rehabilitation	Group Captain C. J. S. O'MALLEY, C.B.E.
8th October Town Section	Some neurological problems of diagnosis	Dr. P. H. SANDIFER
	Vascular phenomena	Mr. G. L. W. BONNEY
	Resettlement	Mr. D. M. BROOKS
9th October Country Section	Appliances: prescription	Mr. H. J. SEDDON
	Appliances: construction	Mr. W. TUCK

The fee for this course (including lunch and tea) is 7 guineas.

Early application should be made to the Dean, at 234, Great Portland-street, W.1.

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INSTITUTE OF ORTHOPÆDICS

CLINICAL DEMONSTRATIONS (open without fee to all medical men and women) will be held at the Town Section of the Royal National Orthopædic Hospital, 234, Great Portland-street, London, W.1, at 10 A.M. on SATURDAYS: 26TH SEPTEMBER, 28TH NOVEMBER, 23RD JANUARY, and 27TH MARCH.

THE UNITED CARDIFF HOSPITALS

MEDICAL PROFESSORIAL UNIT

RESEARCH FELLOWSHIP

Applications are invited for appointment to the Cardiff Royal Infirmary Research Fellowship in Medicine in the Professorial Unit of the Welsh National School of Medicine at the Infirmary. The appointment, at a salary of £1000 p.a. with superannuation, is normally tenable for a period of 2 years. The person appointed may take a limited part in the teaching and routine work of the Department.

Applications, giving the names of 2 referees, should be sent before 20th October to the House Governor, The Cardiff Royal Infirmary, Cardiff, from whom further particulars about this appointment may be obtained.

GUY'S HOSPITAL MEDICAL SCHOOL. Applications are invited for the post of JUNIOR LECTURER IN BACTERIOLOGY. Duties to commence on 1st October, 1953. Salary scale £900–£100–£1100 with F.S.S.U. benefits and family allowance.

Forms of application are obtainable from, and should be lodged with, the Dean, Medical School Office, not later than 8th September, 1953.

THE INSTITUTE OF LARYNGOLOGY AND OTOLOGY (University of London), 330/332, Gray's Inn-road, W.C.1. FIRST ASSISTANT to the Professorial Unit (Senior Registrar status). Applications are invited for this post with effect from 1st November, 1953. A higher qualification in surgery is required and candidates must have held an otolaryngological registrarship in a teaching hospital. The post is a full-time one tenable for an initial period of 1 year, subject to annual re-election thereafter. Salary commencing at the rate of £1100 p.a. with superannuation benefits and 2 annual increments of £100 in the event of reappointment.

Applications in triplicate, giving full particulars of age, qualifications and experience, and accompanied by the names of 2 referees, should be sent to the Secretary not later than 8th October.

THE UNIVERSITY OF LEEDS. The Council invites applications for a RESEARCH FELLOWSHIP, tenable jointly in the Departments of Dermatology and of Biomolecular Structure to carry out fundamental investigations on the structure of the skin in health and disease. Salary will be not less than £700 a year. Candidates should have qualifications that are basically physico-chemical and/or biochemical, with preferably a leaning towards biological problems.

Applications (3 copies), stating age, qualifications, and experience, together with the names of 3 referees, should reach the Registrar, The University, Leeds, 2 (from whom further particulars may be obtained), not later than 28th September, 1953.

UNIVERSITY OF BIRMINGHAM. Faculty of Medicine. Applications are invited for the appointment of a Whole-time LECTURER (grade II—scale £600–£1200) in the Department of Anatomy (Director: Professor S. Zuckerman). Commencing salary according to age, qualifications and experience. F.S.S.U. and family allowance. Good facilities and adequate time are available for research.

Applications (3 copies), with names of 3 referees, should be received by the Assistant Registrar, The Medical School, Birmingham, 15, not later than 31st October, 1953. Further particulars may be obtained from the undersigned.

C. G. BURTON, Secretary.

The University, Edmund-street, Birmingham, 3,
August, 1953.

TRAVELLING FELLOWSHIP IN THORACIC SURGERY. THE AMERICAN ASSOCIATION FOR THORACIC SURGERY is offering a Fellowship value 3000 dollars for 12 months study and research in thoracic surgery and allied subjects in the U.S.A. The appointment is to be made by the Society of Thoracic Surgeons of Great Britain and Ireland.

Inquiries and applications should be made to the Secretary of the latter Society at 40, Inner Park-road, London, S.W.19, on or before 1st October, 1953. Applications must state experience, qualifications, &c., and the names of 2 referees.

THE SASKATCHEWAN DIVISION OF THE CANADIAN ARTHRITIS AND RHEUMATISM SOCIETY invites 2 applications for the position of FELLOW in the Regina Research and Treatment Units. These positions are now available, duties to include medical supervision of a 14-Bed service in the Regina General Hospital and associated research projects; and the 8-Bed unit in the Regina Grey Nuns' Hospital. Full consultative services are available. Value of Fellowship: $3000 p.a.

For further information apply Executive Director, Canadian Arthritis and Rheumatism Society, Saskatchewan Division, 304, Northern Crown Building, Regina, Saskatchewan.

UNIVERSITY OF MALAYA, Singapore. Applications are invited for appointment to 2 ASSISTANT LECTURESHIPS IN ANATOMY. Salary £735 p.a., plus special temporary allowance of £210 p.a. if medically qualified. Cost-of-living allowance £295–£469 p.a. according to personal circumstances. All paid in Malayan currency. Free passages for appointee, wife, and children under 12 years of age. Part-furnished quarters at rent not exceeding 10% of salary or housing allowance in lieu. Provident Fund scheme on contributory basis.

Applications (6 copies), with the names of 3 referees, and full details of qualifications and experience, should be sent to the Secretary, Inter-University Council for Higher Education in the Colonies, 1, Gordon-square, London, W.C.1, from whom further particulars may be obtained. Closing date 10th September, 1953.

Hospital Services: Senior Appointments

ELIZABETH GARRETT ANDERSON HOSPITAL. ROYAL FREE HOSPITAL GROUP. NEUROLOGY SECTION. Applications are invited from registered Women medical practitioners for the appointment of Part-time NEUROLOGIST (Consultant status). Duties to commence on 15th November, 1953. Salary and terms of service in accordance with those laid down by the Ministry of Health. Applicants must be Fellows or Members of the Royal College of Physicians.

Applications, giving details of experience and accompanied by the names of 3 referees should be sent not later than 19th September, 1953, to the Secretary to the Board of Governors, The Royal Free Hospital, Gray's Inn-road, London, W.C.1.

NORTH EAST METROPOLITAN REGIONAL HOSPITAL BOARD. Applications are invited for appointment as:—

Part-time CONSULTANT OPHTHALMIC SURGEON (1 session a week), London Jewish Hospital, Stepney Green, E.1.

Part-time ASSISTANT OPHTHALMOLOGISTS (Senior Hospital Medical Officer grade).

(i) Central School Clinic, Town Hall, Walthamstow, E.17. (4 sessions a week on Tuesday P.M., Friday A.M. and P.M., Saturday A.M.)

(ii) Mayesbrook School Clinic, Goodmayes-lane, Ilford, Essex. (2 sessions a week on Monday P.M. and Tuesday A.M.)

(iii) Old Ford School Treatment Centre, Wendon-street, E.3. (2 sessions a week on Wednesday A.M. and P.M.)

Separate applications (6 copies—or 9 copies if more than 1 post is applied for), indicating post concerned and detailing private address, date of birth, qualifications, and experience, present appointment(s) (including number of sessions), and grade, and names of 3 referees, should reach the Secretary, 11A, Portland-place, London, W.1, by Saturday, 19th September, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. ASSISTANT CHEST PHYSICIAN (whole-time) required for duties at Edgware Chest Clinic, Edgware General Hospital, Edgware, Middlesex (4 half-days a week); Ealing Chest Clinic, Green Man-passage, W.13 (4 half-days a week); and Harrow Chest Clinic, 199, Station-road, Harrow, Middlesex (3 half-days a week). Each clinic has associated beds. Duties will be so arranged as to give the candidate appointed experience in all aspects of clinic work. Salary scale £1300 (at age 32)–£1750. Candidates should have good general medical experience and special experience in tuberculosis and diseases of the chest. Appointments normally made from candidates over 32 years but applications from candidates under that age considered. Clinics may be visited by direct appointment.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 3rd October, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. CONSULTANT CHILD PSYCHIATRIST required at Portman Clinic, 8, Bourdon-street, Davies-street, W.1, for 4 half-days a week. Candidates should have experience of child and general psychiatry and psychotherapy. Duties will include diagnosis and treatment (including supervision of lay therapists and social therapy) of child and adolescent problems, cases, and delinquents. Psycho-analytic training and experience will be an advantage. Clinic may be visited by direct appointment.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 10th October, 1953.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the whole-time resident post of CONSULTANT PSYCHIATRIST AND MEDICAL SUPERINTENDENT of Whittingham Hospital, near Preston (about 3000 Beds), and Consultant Psychiatrist to Blackpool and Fylde Hospital Management Committee, with clinics at Victoria Hospital, Blackpool. A modern house is about to be built in the grounds. Applicants must be of high professional standing, with wide experience and possess higher qualifications.

Application forms can be obtained from the Senior Administrative Medical Officer to the Board at Cheetwood-road, Manchester, 8, and should be returned to be received not later than 21st September, 1953.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the additional post of CONSULTANT ANÆSTHETIST to the Lancaster and Kendal Hospital Centre (Royal Lancaster Infirmary, Queen Victoria Hospital, Morecambe, Westmorland County Hospital, Kendal, and Lancaster Moor Hospital, Lancaster, &c.). Appointment will be whole-time for 3 years, after which the Board will consider applications for part-time employment. Wide experience and D.A. essential. Successful candidates to live in area.

Application forms from the Senior Administrative Medical Officer at Cheetwood-road, Manchester, 8, to be returned by 28th September, 1953.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the 2 additional whole-time non-resident posts of CONSULTANT OBSTETRICIAN/GYNÆCOLOGIST to:—

(1) Wigan and Leigh Hospital Centre (Royal Albert Edward Infirmary, Wigan; Leigh Infirmary; Billinge Hospital, &c., 70 obstetric, 59 gynæcology beds).

(2) Bolton and District Hospital Centre (Bolton District General Hospital; Bolton Royal Infirmary and associated maternity homes in Bolton; 160 obstetric, 50 gynæcology beds).

The appointments will be whole-time for 3 years, after which the Board will consider applications for part-time employment. Wide experience and higher qualifications essential. Successful candidates to live near main hospitals. Applicants for more than 1 post to indicate preference, if any.

Application forms from the Senior Administrative Medical Officer at Cheetwood-road, Manchester, 8, to be returned by 28th September, 1953.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the whole-time resident post of DEPUTY PHYSICIAN-SUPERINTENDENT at Monsall Isolation Hospital, Manchester (480 Beds, including 85 for pulmonary tuberculosis). Good experience in general medicine and particularly in diagnosis and treatment of infectious diseases essential. Small house or single quarters available. Salary £1300–£50–£1750 p.a.

Application forms from Senior Administrative Medical Officer at Cheetwood-road, Manchester, 8, to be returned by 14th September, 1953.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the whole-time non-resident post of SENIOR HOSPITAL MEDICAL OFFICER in Orthopædics to the Oldham and District Hospital Centre, mainly at Oldham Royal Infirmary. Duties will be predominantly in the Accident Service in the Fracture and Casualty Clinics. Wide experience, good training, and F.R.C.S. essential. Salary £1300–£50–£1750 p.a. Appointee to live near main hospital.

Application forms from the Senior Administrative Medical Officer at Cheetwood-road, Manchester, 8, to be received by 28th September, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. DIAGNOSTIC RADIOLOGIST (Consultant), required at Hillingdon Hospital, near Uxbridge, Middlesex (705 Beds), and other hospitals in the Group. Whole-time or maximum sessions. The department conducts a large volume of radiological work of all types other than neuroradiology. Candidates invited to visit Hospital by direct arrangement with Medical Director.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 10th October, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. ASSISTANT PSYCHIATRIST required at Leavesden Hospital, Abbots Langley, Watford (2176 Beds for Mental Defectives). Whole-time. Salary scale £1300 (at 32 years)–£1750. Hospital may be visited by direct appointment.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 10th October, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. SURGEON (Consultant) required for the Windsor Group of Hospitals for 6 half-days a week. Duties chiefly at Upton Hospital, Slough (213 Beds), but also at Canadian Red Cross Memorial Hospital, Taplow (332 Beds). Successful candidate would be required to reside locally. Hospitals may be visited by direct appointment.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 10th October, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. SENIOR CARDIOLOGIST (Consultant), preferably on the staff of a teaching hospital, required in the Special Unit for Research into Juvenile Rheumatism (100 Beds) at the Canadian Red Cross Memorial Hospital, Taplow, Bucks, for 1 half-day a week. Hospital may be visited by direct appointment.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 3rd October, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. ASSISTANT CHEST PHYSICIAN (whole-time) required at Bedford Chest Clinic, Bedford General Hospital (North Wing), Kimbolton-road, Bedford. Salary scale £1300 (at age 32)–£1750. The clinic has associated with it 24 beds for the treatment of chest diseases. Candidates should have good general medical experience and special experience in tuberculosis and diseases of the chest. Appointments normally made from candidates over 32 years but applications from candidates under that age considered. Clinic may be visited by direct appointment.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 3rd October, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. ASSISTANT ANÆSTHETIST (whole-time) required at West Middlesex Hospital, Isleworth, Middlesex (1147 Beds with all the usual special departments), and neighbouring hospitals. Salary scale £1300 (at age 32)–£1750. Hospital may be visited by direct appointment.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 10th October, 1953.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. E.N.T. SURGEON (Consultant) required for 1 half-day a week at Potters Bar and District Hospital, Muttonlane, Potters Bar, Middlesex. Hospital may be visited by direct appointment.

Detailed applications, including date of birth, and names of 3 referees, to Secretary, North West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 10th October, 1953.

NEWCASTLE REGIONAL HOSPITAL BOARD. Sanderson ORTHOPÆDIC HOSPITAL, GOSFORTH. (120 Beds—at present mainly children.) ASSISTANT ORTHOPÆDIC SURGEON (resident in or very near the Hospital). Accommodation for a single or married man is available in the Hospital, if required. The successful candidate will also be required to undertake duties in the Peripheral Orthopædic Clinics and in the acute Orthopædic Department in Tynemouth hospitals where there are 22 Beds. Salary scale £1300–£1750 p.a. Further particulars may be obtained from the Consultant Orthopædic Surgeon, Sanderson Orthopædic Hospital, Gosforth, Newcastle upon Tyne, 3.

Applications, together with names and addresses of referees (preferably), or testimonials to a total of 3, to be sent to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, within 28 days.

NEWCASTLE REGIONAL HOSPITAL BOARD. Locum CHEST PHYSICIAN required for 6 months for the Gateshead Tuberculosis Administrative Area. Salary 31½ guineas per week. Resident accommodation available at Norman's Riding Hospital. Duties will include charge, under the Senior Consultant Chest Physician, of the Whickham Chest Clinic, assistance in the Gateshead Central Chest Clinic, and Resident Medical Officer at a modern sanatorium 4 miles from Newcastle.

Applications, together with names and addresses of referees (preferably), or testimonials to a total of 3, to be sent to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, immediately.

NEWCASTLE REGIONAL HOSPITAL BOARD. South WEST DURHAM HOSPITAL MANAGEMENT COMMITTEE GROUP. CONSULTANT ANÆSTHETIST. Locum tenens appointment for approximately 2–3 months for hospitals in the above Group. Salary 45 guineas per week, or 31½ guineas per week, according to status.

Applications, together with names and addresses of referees (preferably), or testimonials to a total of 3, to be sent to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, immediately.

NEWCASTLE REGIONAL HOSPITAL BOARD. Assistant RADIOLOGIST (temporary), whole-time appointment approximately 1 year for hospitals in the northern part of the Region, and centred primarily on Gateshead. Further particulars may be obtained from the Senior Consultant Radiologist, Queen Elizabeth Hospital, Gateshead. Salary scale £1300–£1750.

Applications, together with names and addresses of referees (preferably), or testimonials to a total of 3, to be sent to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, within 28 days.

OXFORD REGIONAL HOSPITAL BOARD. Applications are invited for the post of CONSULTANT PÆDIATRICIAN to the Hospitals of the Northampton and Kettering Hospital Management Committees, as a member of the Area team. A higher medical qualification is required. The appointment is for 8 half-days. Applicants are invited to visit the hospitals by arrangement with the Secretary, Northampton Hospital Management Committee, and the Secretary, Kettering Hospital Management Committee.

Applications (9 copies), stating age, experience, and giving the names and addresses of 3 referees, to the Secretary, Oxford Regional Hospital Board, 43, Banbury-road, Oxford (from whom full details can be obtained), should reach him by 26th September, 1953.

SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time ASSISTANT ANÆSTHETIST required for the Doncaster Hospitals. Salary £1300–£1750.

Application forms and details from Senior Administrative Medical Officer, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, to be returned to the Secretary by 26th September, 1953.

SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time Locum ASSISTANT RADIOTHERAPIST required immediately at Derbyshire Royal Infirmary for a period of approximately 4 months. Remuneration 31½ guineas per week.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, naming 2 referees.

SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time SENIOR ASSISTANT PSYCHIATRIST required for the Lawn Hospital, Lincoln. A flatlet is available. Salary £1300–£50–£1750.

Application forms obtainable from Senior Administrative Medical Officer, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield. Forms to be returned by 3rd October, 1953.

SOUTH SOMERSET CLINICAL AREA. South-Western REGIONAL HOSPITAL BOARD. Applications are invited from registered medical practitioners for the appointment of AREA PATHOLOGIST in the South Somerset Clinical Area. The appointment may be held either on a whole-time or maximal (9 sessions) part-time basis in the Consultant grade. Applicants should possess high medical qualifications, and have had wide experience in pathology. The successful candidate will be required to coördinate the Pathological Services in the South Somerset Area, and to visit all the hospitals in this Clinical Area as may be determined by the Regional Board from time to time. The main laboratory is situated in the Taunton and Somerset Hospital, Taunton.

Applications (12 copies), stating date of birth, qualifications and experience, together with 12 copies of 2 testimonials, and the names and addresses of 2 referees, should be sent to the Secretary of the Regional Hospital Board, 27, Tyndalls Park-road, Bristol, 8, not later than 26th September, 1953.

SCOTLAND. RED CROSS SANATORIA OF SCOTLAND. (156 Beds.) Applications are invited for the post of SENIOR ASSISTANT MEDICAL OFFICER at the above Sanatoria. Candidates should hold a higher qualification in medicine and must have had experience in the treatment of pulmonary tuberculosis and in the aftercare of thoracic surgical cases. Commencing salary £1300 p.a., rising by £50 annually to a maximum of £1750, less a deduction for any emoluments provided. Unfurnished accommodation for a married man is available.

Applications, accompanied by the names of 2 referees, to be sent to the Medical Director, Tor-na-Dee, Milltimber, Aberdeenshire, before 19th September, 1953.

SCOTLAND. SOUTH-EASTERN REGIONAL HOSPITAL BOARD. Applications are invited for a post of Whole-time CONSULTANT in the Department of Anæsthetics, Royal Infirmary of Edinburgh. The post is superannuable and the conditions of service are in accordance with the regulations.

Applications, giving particulars of age, qualifications and previous experience, together with the names of 3 referees, should be submitted to the Secretary, South-Eastern Regional Hospital Board, Scotland, 11, Drumsheugh-gardens, Edinburgh, 3, by 28th September.

SCOTLAND. SOUTH-EASTERN REGIONAL HOSPITAL BOARD. Applications are invited for the post of ASSISTANT PHYSICIAN (psychiatrist) at the Gogarburn Mental Deficiency Institution, Edinburgh, on the salary scale £1300–£50–£1750. Experience in mental deficiency work is not essential, provided the applicant has wide experience in other fields of Psychiatry. The person appointed will be required to take part in undergraduate and postgraduate teaching. A house is available and appropriate deductions made in respect of rent, &c. The post is superannuable, and the conditions of service are in accordance with the regulations.

Applications, giving particulars of age, qualifications, and previous experience, together with the names of 3 referees, should be submitted to the Secretary, South-Eastern Regional Hospital Board, Scotland, 11, Drumsheugh-gardens, Edinburgh, 3, within 30 days.

SCOTLAND. NORTH-EASTERN REGIONAL HOSPITAL BOARD. Applications are invited for the appointment of a CONSULTANT ORTHOPÆDIC SURGEON to the Regional Orthopædic Surgery Unit. Applicants should have wide experience in orthopædic surgery and be in possession of an appropriate higher qualification. Terms and conditions of service are as laid down for hospital medical and dental staffs under the National Health Service (Scotland) Act.

Applications, together with the names and addresses of 2 referees, should be forwarded by 14th September, 1953, to the Secretary, 1, Albyn-place, Aberdeen, from whom further particulars may be obtained.

SCOTLAND. NORTH-EASTERN REGIONAL HOSPITAL BOARD. Applications are invited for the post of ASSISTANT DIAGNOSTIC RADIOLOGIST on the staff of the Aberdeen General Hospitals. Candidates should have experience in their specialty and preferably hold a Diploma in Radiology. The salary is on the scale £1300–£1750 and the terms and conditions of service for hospital medical and dental officers under the National Health Service (Scotland) Act will apply to the post.

Applications, together with the names and addresses of 2 referees, should be forwarded by 14th September, 1953, to the Secretary, 1, Albyn-place, Aberdeen, from whom further particulars may be obtained.

SCOTLAND. WESTERN REGIONAL HOSPITAL BOARD. Applications are invited for the following appointments :—

Part-time CONSULTANT OPHTHALMOLOGIST in charge of wards at Glasgow Eye Infirmary and with other duties in the Region as may be arranged on the basis of 8 sessions weekly.

Part-time CONSULTANT PÆDIATRICIAN at the Royal Hospital for Sick Children, Glasgow, and with Regional duties as may be arranged on the basis of 8 sessions weekly.

These appointments are subject to the National Health Service (Scotland) superannuation regulations.

Applications (16 copies), stating date of birth, qualifications, experience, present appointment, and the names of 3 referees, to reach the Secretary, Western Regional Hospital Board, 64, West Regent-street, Glasgow, not later than 30 days after the publication of this advertisement.

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD requires Part-time CONSULTANT OPHTHALMOLOGIST (3 half-days per week) for the St. Helier (Surrey) Group of hospitals. Duties mainly at the Sutton and Cheam Hospital.

Applications (5 copies), giving date of birth, qualifications, experience, names of 3 referees, to Secretary (S.1), South West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 3rd October, 1953. Applicants may visit Hospital by local arrangement.

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD requires Part-time CONSULTANT SURGEON (9 half-days per week) for the Worthing Group of hospitals. Candidates should have some experience in urology.

Applications (5 copies), giving date of birth, qualifications, experience, names of 3 referees, to Secretary (S.1), South West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 3rd October, 1953. Applicants may visit hospitals by local arrangement.

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD requires Part-time CONSULTANT OPHTHALMOLOGIST (2 half-days per week) for the Winchester Group of hospitals. Duties mainly at Royal Hampshire County Hospital.

Applications (5 copies), giving date of birth, qualifications, experience, names of 3 referees, to Secretary (S.1), South West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 3rd October, 1953. Applicants may visit hospitals by local arrangement.

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. A LOCUM TENENS in Physical Medicine required for the Portsmouth Group of hospitals from 12th to 26th September, 1953, inclusive. The appointment will be for 9 sessions weekly, and remuneration at the rate of 45 guineas per week, if holding National Health Service Consultant grading, or 31½ guineas per week.

Applications immediately to Dr. J. REVANS.
Beeston House, Water-lane, Winchester.

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD requires Whole-time ASSISTANT PSYCHIATRIST (Senior Hospital Medical Officer grade) at Cane Hill Hospital, Coulsdon, Surrey, which has 4 outpatient clinics and undertakes postgraduate teaching in association with the Institute of Psychiatry. It is within easy reach of the London Teaching Centres and every facility is given to staff working for higher medical qualifications.

Applications (5 copies), giving date of birth, qualifications, experience, names of 3 referees, to Secretary (S.1), South West Metropolitan Regional Hospital Board, 11A, Portland-place, W.1, by 26th September, 1953. Applicants may visit Hospital by local arrangement.

NEW ZEALAND. COOK HOSPITAL BOARD, Gisborne. Applications, closing Friday, 25th September, 1953, are invited from registered medical practitioners for the appointment of Full-time ANÆSTHETIST. Salary in accordance with the Hospital Employment Regulations salary rates for the following gradings :—

Junior Specialist : £1290–£1590 p.a.
Senior Registrar : £1043 3s.–£1158 3s. p.a.

Amounts quoted are in New Zealand currency. The position is non-resident. Gisborne, with a population of 21,000, is situated on the sea coast and enjoys an ideal climate.

Conditions of appointment may be obtained on application to the High Commissioner for New Zealand, 415, Strand, London, W.C.2.

SINGAPORE. THE ROYAL SINGAPORE TUBERCULOSIS CLINIC. Applications are invited for CHEST PHYSICIANS to meet the expanding work of the Clinic. The Clinic has well-equipped Diagnostic and Treatment Units where a variety of chest diseases is seen and where treatment is given to a large number of patients suffering from pulmonary tuberculosis. Opportunity is afforded for research as well as observation of various manifestations of chest disease. The commencing salary is at the rate of £1850 p.a. or higher for special experience.

Further information can be obtained from the Secretary, N.A.P.T., Tavistock-square, London, W.C.1, or from the Medical Director, S.A.T.A., Singapore.

WESTERN AUSTRALIA. ROYAL PERTH HOSPITAL. The Board of Management invites applications for the position of Whole-time ASSISTANT RADIOLOGIST. Applicants must hold a Diploma in Medical Radiology (Diagnostic). Salary range £1750–£2000 (Australian) p.a., with periodical cost-of-living adjustment. Commencing salary rate is dependent upon qualifications and experience. The Agent-General for Western Australia, Savoy House, The Strand, London, will supply on request a memorandum of further particulars concerning this position.

Applications detailing age, marital status, qualifications, experience, War Service, &c., must reach the undersigned by 5th October, 1953. JOSEPH GRIFFITH, Manager.

Hospital Services : Junior Appointments

BEARSTED MEMORIAL HOSPITAL (Jewish Maternity Hospital), Lordship-road, N.16. RESIDENT OBSTETRIC HOUSE OFFICER (third post) required at above Hospital, on 1st October, 1953. Previous experience in obstetrics essential. Post recognised for the D.Obst.R.C.O.G.

Application forms from the Secretary, Tottenham Group Hospital Management Committee, The Green, N.15, which should be returned at once.

BETHNAL GREEN HOSPITAL, London, E.2. (General—313 Beds.) CENTRAL GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from registered medical practitioners for the post of HOUSE SURGEON. The appointment is for 6 months only and the salary £350, £400, or £450 p.a., according to experience. The Hospital is recognised for the Final F.R.C.S. (Eng.).

Applications, stating age, nationality, qualifications and experience, and copies of 2 recent testimonials, should reach the Hospital Secretary as soon as possible.

COLINDALE HOSPITAL, Colindale-avenue, London, N.W.9. HOUSE SURGEON (resident when on duty) required at the above Hospital to assist in thoracic, orthopædic, and genito-urinary surgery. Salary £400 p.a.–£450 p.a. according to experience. Deduction at the rate of £100 p.a. for board, lodging, &c. 6 months appointment.

Apply immediately, stating age, qualifications, experience, and enclosing up to 3 recent testimonials, to Physician-Superintendent.

DULWICH HOSPITAL, East Dulwich-grove, London, S.E.22. CAMBERWELL HOSPITALS MANAGEMENT COMMITTEE. Applications invited for appointment as HOUSE OFFICER (medical duties), vacant from 1st October. Recognised pre-registration post. Salary £350, £400, or £450 a year according to posts held, less £100 a year for residence.

Applications, stating age, details of qualifications, and previous posts, enclosing copy testimonials, to the Group Secretary, Camberwell Hospitals Management Committee, Dulwich Hospital, East Dulwich-grove, S.E.22.

HAMMERSMITH HOSPITAL AND POSTGRADUATE MEDICAL SCHOOL, London, W.12. BLOOD TRANSFUSION OFFICER (Registrar grade), resident or part-resident, required for 1 year from 1st October. Opportunities for research.

Applications, stating age, qualifications, experience, copies of 2 testimonials, to Secretary, Board of Governors, by 12th September.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury-road, London, E.7. Applications are invited for the post of CASUALTY OFFICER AND ORTHOPÆDIC HOUSE SURGEON combined with the post of Deputy Resident Surgical Officer (Senior House Officer), Male or Female, at the above Hospital for 6 months commencing as soon as possible. Post recognised for F.R.C.S.

Applications, together with copies of recent testimonials, to the Group Secretary, West Ham Group Hospital Management Committee, Stratford, London, E.15, by 19th September, 1953.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston-road, N.W.1. (ROYAL FREE HOSPITAL GROUP.) Applications are invited from pre-registration and registered Women medical practitioners for the post of FIRST HOUSE SURGEON, with charge of general surgical beds. Post recognised for F.R.C.S. examination. Appointment for 6 months from 1st November, 1953. Salary according to Ministry of Health scale for House Officers.

Applications, with copies of 3 recent testimonials, should be sent to the Secretary, Elizabeth Garrett Anderson Hospital, by 17th September, 1953.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston-road, N.W.1. (ROYAL FREE HOSPITAL GROUP.) Applications are invited from pre-registration and registered Women medical practitioners for the post of SECOND HOUSE PHYSICIAN to become vacant 1st November, 1953. Appointment for 6 months. Salary according to Ministry of Health scale for House Officers.

Applications, with copies of 3 recent testimonials, should be sent to the Secretary, Elizabeth Garrett Anderson Hospital, by 17th September, 1953.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston-road, N.W.1. (ROYAL FREE HOSPITAL GROUP.) Applications are invited from pre-registration and registered Women medical practitioners for the post of OBSTETRIC HOUSE SURGEON (recognised for the M.R.C.O.G.). Duties to commence 1st November, 1953. Appointment for 6 months. Salary in accordance with Ministry of Health scale for House Officers.

Applications, with copies of 3 recent testimonials, to be sent to the Secretary, Elizabeth Garrett Anderson Hospital, by 17th September, 1953.

GERMAN HOSPITAL, Dalston, London, E.8. (General.) Applications are invited for the appointment of HOUSE SURGEON for a period of 6 months, and should be sent to the Group Secretary, Hackney Hospital Management Committee, London, E.9, by 15th September, quoting reference GH/HS.

LAMBETH HOSPITAL, Brook-drive, S.E.11. South West METROPOLITAN REGIONAL HOSPITAL BOARD. Applications are invited for the post of MEDICAL REGISTRAR. The appointment will be for 1 year in the first instance. A higher qualification in medicine is desirable. Canvassing will disqualify, but candidates are not precluded from visiting the Hospital.

For forms of application apply (enclosing stamped addressed envelope) to the Secretary, Lambeth Group Hospital Management Committee, Renfrew-road, S.E.11, to whom completed forms should be returned not later than 18th September, 1953.

LONDON CHEST HOSPITAL. Hospitals for Diseases OF THE CHEST. Applications are invited for the appointment of Part-time SURGICAL FIRST ASSISTANT. Duties require the equivalent of 9 notional half-days a week. The post is graded as Senior Registrar and the appointment is for 1 year and renewable. Higher surgical qualifications and experience in thoracic surgery essential.

Applications, with copies of 3 testimonials, should be sent to the House Governor, The London Chest Hospital, E.2 (from whom further particulars may be obtained), to arrive by 17th September, 1953.

MARIE CURIE HOSPITAL, 66, Fitzjohn's-avenue, Hampstead, N.W.3. Applications are invited from registered medical practitioners for the post of GYNÆCOLOGICAL HOUSE SURGEON (radiotherapy). Vacant immediately.

Application with copies of testimonials to the Medical Director.

MANOR HOUSE HOSPITAL, Golders Green, N.W.11. (Exempted from National Health Service.) Required, RESIDENT SURGICAL OFFICER (Male). Salary £670 p.a., less £100 p.a. deducted for emoluments. 6 months appointment, renewable.

Applications, stating age, nationality, qualifications, and surgical or orthopædic experience, with copies of 3 testimonials, to—

W. F. PENDRILL, Secretary.

MILE END HOSPITAL, Bancroft-road, E.1. (475 Beds.) HOUSE PHYSICIAN (pre-registration or first, second, or third). Post vacant first week in October.

Application forms obtainable from Physician-Superintendent to be returned by 17th September together with copies of not more than 3 testimonials.

MILLER GENERAL HOSPITAL. (180 Beds.) Recognised for F.R.C.S. examination. HOUSE SURGEON, vacant 28th September, 1953. 6 months appointment. National salary and conditions.

Applications and testimonials to Secretary, Greenwich and Deptford Hospital Management Committee, St. Alfege's Hospital, Greenwich, S.E.10.

MOTHERS' HOSPITAL (Salvation Army), Clapton, E.5. (Maternity—110 Beds.) Applications are invited for the 12 months appointment, as from 1st October, of a SENIOR HOUSE OFFICER (obstetrics). The post is resident (a charge of £130 p.a. being made) and is recognised for the M.R.C.O.G.

Apply to Secretary, Hackney Hospital Management Committee, London, E.9, by 16th September, quoting MH/SHO/O.

NATIONAL HOSPITALS FOR NERVOUS DISEASES. Applications are invited from registered medical practitioners for the appointment of ANÆSTHETIC REGISTRAR (non-resident) at The National Hospital, Queen-square, W.C.1. This post carries the grade of Senior Registrar. The appointment will be for a period of 1 year in the first instance.

Applications, giving the names of 3 referees, to be sent to the undersigned not later than 19th September, 1953.

H. EWART MITCHELL, Secretary.

The National Hospital, Queen-square, W.C.1.

POPLAR HOSPITAL, East India Dock-road, E.14. (120 Beds.) Required, HOUSE SURGEON (first, second or third post). Duties include inpatient, outpatient, and casualty work. Post recognised for F.R.C.S. Vacant on 18th September.

Applications, stating age, nationality and qualifications, to the Secretary.

PRINCESS BEATRICE HOSPITAL, Earls Court, S.W.5. HOUSE OFFICER for Casualty and Anæsthetic duties. Vacant now for period of 6 months. Registered practitioners.

Applications, with all particulars, and copies of 2 testimonials, to House Governor.

PRINCESS BEATRICE HOSPITAL, Earls Court, S.W.5. RESIDENT HOUSE SURGEON (obstetrics, gynæcology and general surgery) for period of 6 months, vacant now. Registered practitioners only.

Applications, with full details, and copies of 2 testimonials, to House Governor.

NORTH WEST METROPOLITAN REGIONAL HOS-PITAL BOARD. SENIOR REGISTRAR in Pathology (whole-time) required at the Central Histological Laboratory, Whittington Hospital, Archway Wing, N.19. Good experience of morbid anatomy essential. Laboratory may be visited by direct arrangement with the Pathologist.

Application forms obtainable from, and returnable to, the Group Secretary, Archway Group Hospital Management Committee, 46, Cholmeley-park, N.6, by 14th September, 1953.

NORTH EAST METROPOLITAN REGIONAL HOS-PITAL BOARD.

(1) REGISTRAR in Anæsthetics (resident), Bethnal Green Hospital, Cambridge Heath-road, E.2. Recognised for D.A.

(2) REGISTRAR in Anæsthetics (resident preferred), Harold Wood Hospital, Harold Wood, Essex.

(3) E.N.T. REGISTRAR (non-resident), Whipps Cross Hospital, London, E.11.

(4) MEDICAL REGISTRAR (pulmonary tuberculosis), resident, Broomfield Hospital, near Chelmsford, Essex (300 Beds). Some experience of diagnosis and treatment of pulmonary tuberculosis desirable. Post offers experience of all forms of modern therapy together with mass radiography and chest clinic services and duties involve primarily work with thoracic surgeons.

(5) MEDICAL REGISTRAR (pulmonary tuberculosis), resident, Ware Park Hospital, Herts.

(6) REGISTRAR in Obstetrics and Gynæcology (resident or non-resident), General Hospital, Rochford, Essex. Preference given to holders of M.R.C.O.G.

(7) REGISTRAR in Pathology (non-resident), Queen Mary's Hospital for the East End, Stratford, E.15.

(8) REGISTRAR in Psychiatry (resident or non-resident), Severalls Hospital, Colchester.

(9) SURGICAL REGISTRAR (resident or non-resident), Oldchurch Hospital, Romford, Essex. General Surgical Unit has 200 acute beds of which 60 are allotted to this section.

(10) REGISTRAR in General and E.N.T. Surgery, Essex County Hospital, Colchester. Preference given to candidates holding F.R.C.S.

(11) REGISTRAR in Orthopædics (non-resident), Oldchurch Hospital, Romford, Essex. Post provides excellent experience in diagnosis and treatment of orthopædic and accident cases. Applicants should have had previous experience in this type of work.

(12) REGISTRAR in Orthopædics (non-resident), The Prince of Wales's General Hospital, Tottenham, N.15.

Appointments subject to review after 1 year.

Separate applications in duplicate, detailing date of birth, qualifications, experience, present appointment, grade and salary, with 2 copies of 2 recent testimonials, to Secretary, 11A, Portland-place, W.1, by 19th September, 1953.

ROYAL NATIONAL THROAT, NOSE AND EAR HOS-PITAL, Gray's Inn-road, W.C.1, and Golden-square, W.1.

SENIOR REGISTRAR. There will be a vacancy for a Senior Registrar on 1st January, 1954. The appointment will be for an initial period of 1 year and otherwise in accordance with the terms and conditions of service in the National Health Service. Applicants must have had considerable experience in general surgery and in this specialty and hold a higher surgical qualification. Experience in teaching and in methods of research will be taken into consideration.

REGISTRAR. Applications are invited for a post of Registrar as from 1st November, 1953. The appointment will be for an initial period of 1 year and otherwise in accordance with the terms and conditions of service in the National Health Service. Applicants should have had considerable clinical experience in general surgery and in this specialty and they should hold a higher surgical qualification.

Applications for either post should give full information as to qualifications and experience, with the names of 2 referees, and should be sent to the House Governor before 3rd October, 1953.

ROYAL NATIONAL THROAT, NOSE AND EAR HOS-PITAL, Gray's Inn-road, W.C.1, and Golden-square, W.1. Applications are invited for a whole-time post as Locum Tenens ANÆSTHETIC REGISTRAR (Registrar grading) for the period 21st September–7th November, 1953. Salary, &c., in accordance with terms and conditions of service in National Health Service.

Applications, with full details of experience, should be sent to the House Governor immediately.

ROYAL NORTHERN HOSPITAL, Holloway, N.7. Appli-cations are invited for the post of SENIOR HOUSE OFFICER (ophthalmology, E.N.T., and radiotherapy). Salary £670 p.a., less £130 for residential emoluments.

Applications, stating qualifications, and experience, with copies of 3 recent testimonials, to be sent to the Hospital Secretary by 12th September, 1953.

ROYAL NORTHERN HOSPITAL, Holloway, N.7. Appli-cations are invited for the post of CASUALTY OFFICER. Post recognised for F.R.C.S.

Applications, stating qualifications and experience, with copies of 3 recent testimonials, to be sent to the Hospital Secretary by 12th September, 1953.

ST. NICHOLAS HOSPITAL, Tewson-road, Plumstead, S.E.18. SENIOR HOUSE OFFICER (anæsthetics), vacant October. 6 months appointment and may then be renewed. Recognised for F.F.A.R.C.S. and D.A. Salary £670 p.a., less £150 p.a. for residence.

Apply to Group Secretary, Memorial Hospital, Woolwich, S.E.18.

ST. CHARLES' HOSPITAL, Ladbroke-grove, W.10. NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. Whole-time SURGICAL REGISTRAR required at above General Hospital of 593 Beds. Hospital may be visited by direct appointment.

Application forms obtainable from and returnable to Secretary, Paddington Group Hospital Management Committee, Paddington Hospital, 285, Harrow-road, W.9, by 26th September, 1953.

ROYAL MASONIC HOSPITAL, Ravenscourt Park, London, W.6. Applications are invited for a resident appointment as SURGICAL REGISTRAR which will occur about 1st October, 1953. Salary £775 p.a., inclusive of full residential emoluments.

Applications, stating age, qualifications, past and present appointments, together with 2 recent testimonials and also the names of 2 referees, should be received by the Secretary and House Governor at the Hospital by the first post on 14th September, by whom further information would be given on request.

ST. ANDREW'S HOSPITAL, Bow, E.3. Applications are invited for the post of HOUSE PHYSICIAN (recognised pre-registration post), vacant on 10th September. Post is tenable for 6 months.

Applications, stating age and qualifications, with copies of at least 1 testimonial, should be sent immediately to the Medical Superintendent, St. Andrew's Hospital, Bow, E.3.

ST. CLEMENT'S HOSPITAL, London, E.3. Bow Group HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER required for Psychiatric Unit consisting of 24 observation beds and 36 beds for the short-term treatment of psychoses and neuroses. Outpatient facilities for follow-up cases. The Unit is visited by Consultants from the London and Claybury Hospitals.

Apply to Group Secretary, Committee Offices, 2A, Bow-road, E.3.

ST. GILES' HOSPITAL, Camberwell, London, S.E.5. CAMBERWELL HOSPITALS MANAGEMENT COMMITTEE. Applications invited for appointment as HOUSE OFFICER (surgical duties). Position vacant from 25th September, 1953. Salary £350–£450 a year, according to posts held, less £100 a year in respect of residence. Recognised pre-registration post.

Applications, stating age, qualifications, and experience, enclosing copy testimonials, to the Secretary, Camberwell Hospitals Management Committee, Dulwich Hospital, S.E.22.

ST. LEONARD'S HOSPITAL, Nuttall-street, London, N.1. (Acute General—182 Beds.) CENTRAL GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from registered medical practitioners for the post of SENIOR HOUSE OFFICER (Casualty Officer). The post is for 1 year and carries a salary of £670, less residential charges.

Applications to Hospital Secretary by 12th September, 1953.

ST. MARY'S HOSPITAL, Paddington, W.2, and NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. SENIOR REGISTRAR in General Medicine required for a combined appointment. This will be for a period of 3 years only—namely, 2 years at West Middlesex Hospital, Isleworth, and the final year at St. Mary's Hospital, Paddington. Possession of higher medical qualification essential. Candidates already holding Senior Registrar positions are not debarred from applying. Hospitals may be visited by direct appointment.

Application forms obtainable from, and returnable to, Group Secretary, South West Middlesex Group Hospital Management Committee, West Middlesex Hospital, Isleworth, Middlesex, by 15th September, 1953.

ST. MARY'S HOSPITAL, Paddington, W.2. Applications are invited for the post of Part-time REGISTRAR to the E.N.T. Department of St. Mary's Hospital. Candidates must be Fellows of the Royal College of Surgeons of England or Graduates in Surgery of a British University. The appointment will be for a first period of 12 months, as from a date to be arranged, and the successful candidate will be required to undertake 9 notional half-days per week. The grading for this appointment is Senior Registrar.

Applications, stating nationality, date of birth, permanent address, qualifications with dates, and details of previous appointments, with grading, together with the names and addresses of 3 referees, should reach ALAN POWDITCH, House Governor, within 10 days of the appearance of this advertisement.

ST. MARY'S HOSPITAL, W.2. Applications are invited for a whole-time appointment at St. Mary's Hospital. The successful candidate will be required to commence his duties as early as possible and to undertake 7 notional half-days as CANCER REGISTRAR (graded Registrar) and will be responsible for the compiling of Cancer records, together with certain clinical duties at a Constituent Hospital within the St. Mary's Group. The remaining 4 notional half-days will be devoted to the duties of OUTPATIENT SURGICAL ASSISTANT (graded Senior House Officer).

Applications, stating nationality, date of birth, permanent address, qualifications with dates, and details of previous and present appointments, together with the names and addresses of 3 referees, should reach ALAN POWDITCH, House Governor, within 10 days of the appearance of this advertisement.

ST. PETER'S, ST. PAUL'S AND ST. PHILIP'S HOS-PITALS, W.C.2. RESIDENT SURGICAL OFFICER (Senior Registrar grade) required for St. Paul's Hospital on 1st December, 1953. Applications invited from Male candidates on the British register who have completed their training in general surgery. Appointment for 6 months, with opportunity for a further 6 months if recommended. Candidates should be prepared to spend 1 year at the Hospital if required.

Applications (12 copies), with 12 copies of 3 recent testimonials, should reach the House Governor, St. Peter's Hospital, Henrietta-street, W.C.2, by 17th October, 1953.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.1. Applications are invited for the post of MEDICAL REGISTRAR to the Thoracic Unit. The appointment is whole-time, non-resident and is graded as that of a Senior Registrar.

Full particulars and form of application, which must be returned not later than Monday, 5th October, 1953, are obtainable from the undersigned.

H. F. RUTHERFORD, House Governor and Secretary.

August, 1953.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.1. There is a vacancy for a REGISTRAR in the Department of Clinical Pathology.

Full particulars and form of application, which must be returned not later than 30th September, 1953, are obtainable from the undersigned.

H. F. RUTHERFORD, House Governor and Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.1. There will be a vacancy on 21st November, 1953, for a RESIDENT ANÆSTHETIST (Registrar grade).

Full particulars, with form of application, which must be returned not later than Wednesday, 16th September, 1953, may be obtained from the undersigned.

H. F. RUTHERFORD, House Governor and Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.1. There is a vacancy for a Part-time SENIOR REGISTRAR to the Ophthalmic Department, attending for 1 session per week on Thursday afternoons.

Further particulars and form of application, which must be returned not later than Monday, 5th October, 1953, are obtainable from the undersigned.

H. F. RUTHERFORD, House Governor and Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.1. There will be a vacancy for a HOUSE PHYSICIAN (Senior House Officer) on 15th December, 1953.

Further particulars and form of application, which must be returned not later than Monday, 5th October, 1953, may be obtained from the undersigned.

H. F. RUTHERFORD, House Governor and Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.1. There will be a vacancy on 1st January, 1954, for a Part-time REGISTRAR to the Department of Psychological Medicine. The appointment is non-resident, 5 sessions weekly. Applicants should have had previous experience in pædiatrics, and, as the post is recognised for training in child psychiatry, some previous experience in adult psychiatry is essential.

Full particulars, with form of application, which must be returned not later than Monday, 5th October, 1953, are obtainable from the undersigned.

H. F. RUTHERFORD, House Governor and Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.1. There will be a vacancy on 6th November, 1953, for a Part-time SURGICAL REGISTRAR to the Department of Physical Medicine. The appointment is non-resident, entailing attendance for four and a half sessions weekly, as follows: Tuesday and Wednesday morning, Tuesday, Thursday, and Friday afternoon.

Full particulars, with form of application, which must be returned not later than Monday, 5th October, 1953, are obtainable from the undersigned.

H. F. RUTHERFORD, House Governor and Secretary.

August, 1953.

WESTMINSTER CHILDREN'S HOSPITAL. Applications are invited for the post of RESIDENT MEDICAL OFFICER (Registrar) from 1st October, 1953, for 1 year in the first instance.

Apply by letter, stating age, qualifications and experience, with names of 3 referees, to the Secretary, Westminster Children's Hospital, Vincent-square, S.W.1, not later than 12th September.

AYLESBURY. ROYAL BUCKINGHAMSHIRE AND ASSOCIATED HOSPITALS MANAGEMENT COMMITTEE. Applications are invited for the following appointments:—

Royal Buckinghamshire Hospital

SENIOR HOUSE OFFICER to Accident and Orthopædic Department, vacant now. Duties include charge of Casualty Department, together with those of Senior Resident. Salary £670 p.a., less £140 p.a. for residence, &c.

SENIOR HOUSE OFFICER to Accident and Orthopædic Department (which is centred upon this Hospital and comprises 48 Beds), vacant now.

Applications for the above appointments, with 2 testimonials, to Secretary-Superintendent as soon as possible.

Stoke Mandeville Hospital

SENIOR HOUSE OFFICER (pathology) for a busy and expanding laboratory situated at the above Hospital, in which all branches of clinical pathology for over 1000 Beds are undertaken. Salary £670 p.a.

Applications with copies of 2 testimonials to the Administrative Officer as soon as possible.

Tindal General Hospital

HOUSE SURGEON (E.N.T.), Male or Female, vacant now. New department with high turnover and 4 Outpatient Clinics weekly. No casualty department. Recognised for F.R.C.S. and D.L.O.

HOUSE PHYSICIAN (Chest Unit), second or third post, Male or Female, vacant 1st September. Duties include care of about 20 chest cases (including T.B. Chalets) which may increase in due course, and 4 outpatient clinics weekly, including refills, forming a progressive chest unit for the Aylesbury area. Instruction in bronchoscopy and bronchography given. An acute Geriatric Unit, a small long-stay Annexe, and a medical Outpatient Clinic provide some general medicine. No casualty department. Applications for a locum appointment will be considered.

Both posts are recognised for Pre-registration Service, but registered practitioners are invited to apply.

Applications, with 2 testimonials, to the Administrative Officer as soon as possible.

ASHFORD (near), KENT. WILLESBOROUGH HOS-PITAL. Applications are invited for the appointment of HOUSE SURGEON at the above Hospital. Good experience in general surgery with some casualty work. Salary £350, £400, or £450 a year, less £100 a year for residential emoluments.

Applications, stating age, qualifications, and the names and addresses of 2 referees, should be forwarded to the Group Secretary, "Ash-Eton," Radnor Park West, Folkestone.

ASHFORD (near), KENT. WILLESBOROUGH HOSPITAL. Applications are invited for the appointment of HOUSE PHYSICIAN at the above Hospital. Salary £350, £400, or £450 a year, according to experience. A deduction of £100 a year will be made in respect of residential emoluments.

Applications, stating age, qualifications, and the names and addresses of 2 referees, to the Group Secretary, "Ash-Eton," Radnor Park West, Folkestone.

ASHFORD HOSPITAL, Ashford, Kent. Applications are invited for the appointment of RESIDENT HOUSE SURGEON at the above Hospital. Salary £350, £400, or £450 a year, according to experience. A deduction of £100 a year will be made in respect of residential emoluments.

Applications, stating age, qualifications, and the names and addresses of 2 referees, to the Group Secretary, "Ash-Eton," Radnor Park West, Folkestone.

ASHFORD HOSPITAL, Ashford, Middlesex. Staines GROUP HOSPITAL MANAGEMENT COMMITTEE. RESIDENT HOUSE PHYSICIAN (Male) required at above Hospital for cardio-vascular and dietetic wards. 6 months appointment commencing 1st October, 1953. Preference given to pre-registration candidates. National Health Service salary and conditions of service.

Applications, stating age, qualifications, and experience, with copies of up to 3 recent testimonials, to be sent to Medical Director of Hospital by 12th September.

ASHTON, HYDE AND GLOSSOP HOSPITAL MANAGE-MENT COMMITTEE. Applications are invited for the post of SENIOR HOUSE OFFICER (pædiatrics) at Ashton-under-Lyne General Hospital (800 Beds), vacant September.

Applications, to be forwarded to the Group Secretary, Astley-road, Stalybridge, Cheshire.

ARLESEY, BEDS. THREE COUNTIES HOSPITAL (MENTAL). Applications are invited for the post of JUNIOR HOSPITAL MEDICAL OFFICER. Resident or non-resident. Salary £700–£1000 according to experience and qualifications. The Hospital (1200 Beds) which carries out all forms of treatment and provides facilities for research work, is conveniently situated, enabling Medical Officers to attend D.P.M. and other courses in London. Some 900 patients are admitted yearly (85% voluntary). Outpatient Clinics are held at the local general hospitals.

Application forms are available on request to the Medical Superintendent.

BARNSLEY. ST. HELEN HOSPITAL. Barnsley Hos-PITAL MANAGEMENT COMMITTEE. Applications are invited for the post of HOUSE SURGEON (Senior House Officer grade) to the Obstetrical and Gynæcological Unit (107 Beds), duties to commence on 1st October, 1953. The post is recognised for the D.Obst.R.C.O.G. Salary in accordance with terms and conditions of service for hospital medical staff.

Applications should be sent to the undersigned as soon as possible.

J. H. NUNN, Secretary to the Committee.

33, Gawber-road, Barnsley.

BATLEY. THE GENERAL HOSPITAL, Carlinghow Hill, BATLEY, YORKS.

HOUSE SURGEON (E.N.T. and orthopædics).

HOUSE SURGEON (ophthalmology and general surgery).

These posts are available immediately, and applications for locum appointments will be considered. Arrangements can be made for successful candidates to work at other hospitals if they wish to do so.

Applications, giving age, qualifications, and experience, should be submitted to the Administrative Officer.

BEDFORD GENERAL HOSPITAL. (435 Beds.) North WEST METROPOLITAN REGIONAL HOSPITAL BOARD. MEDICAL REGISTRAR (resident) required at above Hospital. Hospital may be visited by direct appointment. Post vacant 1st October, 1953.

Application forms obtainable from, and returnable to, Group Secretary, Bedford Group Hospital Management Committee, 3, Kimbolton-road, Bedford, by 18th September, 1953.

BEDFORD GENERAL HOSPITAL. (435 Beds.) Bedford GROUP HOSPITAL MANAGEMENT COMMITTEE. RESIDENT HOUSE SURGEON required. The appointment offers exceptional opportunities for general experience in a busy Acute Surgical Unit.

Applications, stating age, nationality, qualifications, previous appointments, together with copies of 2 testimonials, should be forwarded to the Group Secretary, 3, Kimbolton-road, Bedford.

BEDFORD GENERAL HOSPITAL. (435 Beds.) Locum RESIDENT GENERAL SURGICAL REGISTRAR required immediately. Salary £16 per week.

Applications, with full particulars, to Group Secretary, Bedford Group Hospital Management Committee, 3, Kimbolton-oad, Bedford.

BEXHILL-ON-SEA. BEXHILL HOSPITAL. (62 Beds.) 2 HOUSE SURGEONS. Posts now vacant. (A small modern hospital on the South coast.) Considerable acute surgical work and busy Outpatient Department. Excellent all-round experience. National scale of salary.

Apply to Hospital Administrator.

BIRMINGHAM, 18. DUDLEY ROAD INFIRMARY, Western-road. JUNIOR HOSPITAL MEDICAL OFFICERS required. The Hospital has 1000 Beds for the care of the chronic sick and an active Geriatric Unit. Salary £700–£1000 p.a.

Applications, with copies of 3 recent testimonials, to Secretary, Hospital Management Committee, Dudley Road Hospital, Birmingham, 18.

BIRMINGHAM, 18. DUDLEY ROAD HOSPITAL. (800 Beds.) HOUSE PHYSICIAN (resident), required in Unit of General Medicine of about 80–100 adult medical beds under control of 2 Consultant Physicians. Recognised pre-registration post.

Detailed applications to the Secretary.

BIRMINGHAM, 9. LITTLE BROMWICH HOSPITAL. Applications are invited from registered medical practitioners for the posts of :—

SENIOR HOUSE OFFICER in General Medicine.

This Hospital is being developed as a General Hospital, 60 Beds now available together with outpatient work. The successful candidate would be expected to work, in addition, in the infectious diseases wards. Post vacant immediately.

SENIOR HOUSE OFFICER for Infectious Diseases.

This Hospital serves a wide area and gives excellent opportunities for the study of infectious diseases. Part of the Hospital is being developed as a General Hospital, where further experience can be gained.

PÆDIATRIC HOUSE PHYSICIAN.

This post, which is recognised for the D.C.H., includes work in the pædiatric and infectious diseases wards and Outpatient Department, and arrangements are made to attend a Neonatal Department and the necessary clinics. Salary £350–£450 p.a., according to experience.

Applications, stating age, qualifications, and experience, with copies of 2 recent testimonials, to the Physician-Superintendent.

BIRMINGHAM, 29. SELLY OAK HOSPITAL. Applica-tions are invited for the appointment of SENIOR HOUSE OFFICER (pædiatrics). Recognised for D.C.H. Salary £670 p.a. Post tenable in the first instance for 6 months. Vacancy in October.

Applications, stating qualifications, experience, and age, with copies of 3 testimonials, to the Medical Superintendent.

BIRMINGHAM ACCIDENT HOSPITAL, Bath-row, Bir-MINGHAM, 15. (215 Beds.) Applications are invited from registered practitioners for the post of RESIDENT SURGICAL OFFICER (Senior House Officer grade), vacant 1st October, 1953. The Hospital is the largest Traumatic Unit in the country, and treats 50,000 new patients each year. The post offers ample opportunity for practical experience in the management of all types of injury, and teaching by the Consultant Staff. Salary at the rate of £670 p.a., less £140 p.a. in respect of emoluments.

Applications, accompanied by copies of recent testimonials, to the Administrator.

BIRMINGHAM ACCIDENT HOSPITAL, Bath-row, Bir-MINGHAM, 15. (215 Beds.) HOUSE SURGEONS (Male or Female). 1 post vacant 1st October. 3 posts vacant 1st November. Recognised for F.R.C.S. The appointments will be for a period of 6 months of which 2 may be spent in the Burns Unit (Medical Research Council). The Hospital is the largest Traumatic Unit in the country and treats 50,000 new patients each year. Posts are open to registered practitioners and pre-registration applicants and offer ample opportunity for practical experience in the management of all types of injury and teaching by the Consultant Staff.

Applications, with copies of recent testimonials or names of 2 referees, to the Administrator.

BIRMINGHAM REGIONAL HOSPITAL BOARD.

(*a*) **Kidderminster General Hospital**

Whole-time REGISTRAR in General Surgery. Experience specialty essential. Higher qualification an advantage. Resident.

(*b*) **Selly Oak Hospital, Birmingham** (1004 Beds)

Whole-time SURGICAL REGISTRAR. Hospital recognised for F.R.C.S. Resident. Experience general surgery required.

Application forms from Secretary, 10 Augustus-road, Birmingham, 15, to be returned before 21st September, 1953.

BIRMINGHAM. THE UNITED BIRMINGHAM HOS-PITALS. Applications are invited for the post of RESIDENT CLINICAL PATHOLOGIST (Senior House Officer grade) in the Department of Bacteriology and Clinical Pathology at the General Hospital. The appointment is tenable for 12 months.

Application forms may be obtained from the Secretary, United Birmingham Hospitals, Queen Elizabeth Hospital, Birmingham, 15, and should be returned to him as soon as possible.

BLACKBURN AND DISTRICT HOSPITAL MANAGE-MENT COMMITTEE. REGISTRAR (anæsthetics) required. Post recognised for D.A. and F.F.A.R.C.S. Residence at Blackburn Royal Infirmary with duties there, Queen's Park Hospital, Accrington Victoria Hospital, and as arranged by Consultant-in-charge.

Apply to the Secretary, Hospital Management Committee Office, Royal Infirmary, Blackburn.

BOURNEMOUTH, HANTS. ROYAL VICTORIA HOS-PITAL, WESTBOURNE. BOURNEMOUTH AND EAST DORSET HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of HOUSE SURGEON for E.N.T. and ophthalmic duties. The appointment is recognised for the D.O. and D.L.O. Diplomas. In addition to the duties at the above Hospital, the successful candidate will be required to assist in E.N.T. outpatient clinics at Royal Victoria Hospital, Bournemouth, and Poole General Hospital.

Applications to the Deputy Hospital Secretary, Royal Victoria Hospital, Shelley-road, Bournemouth.

BOURNEMOUTH. ROYAL VICTORIA HOSPITAL. (492 Beds.) BOURNEMOUTH AND EAST DORSET HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the immediate appointment of RESIDENT SENIOR HOUSE OFFICER (orthopædic and casualty combined). The post is recognised for the F.R.C.S. examination and is tenable for 1 year.

Applications to the Deputy Hospital Secretary.

BOLTON DISTRICT GENERAL HOSPITAL. (545 Beds.) BOLTON AND DISTRICT HOSPITAL MANAGEMENT COMMITTEE. RESIDENT HOUSE SURGEON for general surgical duties, vacant 1st October, tenable for 6 months, and recognised under the Pre-registration Service scheme.

Applications, stating age, nationality, qualifications and experience, and the names of 2 referees, should be sent immediately to H. P. TRAVIS, Group Secretary.

The Royal Infirmary, Bolton.

BISHOP'S STORTFORD, HERTS. HAYMEADS HOSPITAL. (350 occupied beds. Midway between London and Cambridge. Main Line Railway from Liverpool Street.) Applications are invited from registered medical practitioners for a RESIDENT HOUSE OFFICER (surgical), first or second post held. Pre-registration post. Salary £350–£400 p.a., less £100 p.a. for residential emoluments. Appointment to commence as soon as possible.

Applications, stating age, nationality, qualifications and experience, with copies of recent testimonials or the names of referees, to the Hospital Secretary.

BISHOP'S STORTFORD, HERTS. HAYMEADS HOSPITAL (350 occupied beds. Midway between London and Cambridge. Main Line Railway from Liverpool Street.) Applications are invited from registered medical practitioners for the resident appointment of SENIOR HOUSE OFFICER (pathology). Salary £670 p.a. The appointment is for a period of 1 year, duties to commence 7th October, 1953.

Applications, giving fullest details, together with copies of recent testimonials or the names of referees, to the Hospital Secretary.

BISHOP'S STORTFORD AND DISTRICT HOSPITAL, Rye-street, BISHOP'S STORTFORD, HERTS. (67 Beds—medical, surgical, and maternity. Midway between London and Cambridge. Main Line Railway from Liverpool Street.) Applications are invited from registered medical practitioners for a RESIDENT HOUSE OFFICER (first or second post held). Salary £350–£400 p.a., less £100 p.a. for residential emoluments. Appointment to commence as soon as possible.

Applications, stating age, nationality, qualifications and experience, with copies of recent testimonials or the names of referees, should be sent to the Hospital Secretary, Haymeads Hospital, Bishop's Stortford, Herts.

BRADFORD CHILDREN'S HOSPITAL. (102 Beds.) HOUSE OFFICER (Female), vacant now. Salary £350–£450 p.a., less £100 p.a. residential emoluments. (Recognised for D.C.H.)

Applications, stating age, nationality, qualifications and experience, with copy testimonials, to Secretary, Bradford Royal Infirmary.

BRADFORD. ROYAL EYE AND EAR HOSPITAL.
HOUSE SURGEON (E.N.T.), vacant now.
HOUSE SURGEON (ophthalmology), vacant now.
Hospital recognised for D.L.O., D.O.M.S., and F.R.C.S. Salary for both posts £350–£450 p.a., less £100 p.a. residential emoluments.

Applications, stating age, nationality, qualifications and experience, with copy testimonials, to Secretary, Bradford Royal Infirmary.

BRADFORD ROYAL INFIRMARY.
ORTHOPÆDIC HOUSE SURGEON/CASUALTY OFFICER, vacant 1st October.
HOUSE OFFICER (anæsthetics), vacant 27th October.
Salary for above 2 posts £350–£450 p.a., less £100 p.a. residential emoluments.

Applications, stating age, nationality, qualifications, and experience, with copy testimonials, to Secretary.

BRADFORD. ST. LUKE'S HOSPITAL.
SENIOR ORTHOPÆDIC HOUSE SURGEON/CASUALTY OFFICER, vacant now. Salary £670 p.a., less £130 p.a. residential emoluments.
HOUSE OFFICER (pædiatrics), vacant now.
HOUSE SURGEON (general and casualty), vacant now.
HOUSE SURGEON (general and plastic), vacant now.
ORTHOPÆDIC HOUSE SURGEON/CASUALTY OFFICER vacant now.

Salary for above 4 posts £350–£450 p.a., less £100 p.a. residential emoluments.

Applications for all above posts, stating age, nationality, qualifications, and experience, with copy testimonials, to Secretary, Bradford Royal Infirmary.

BRAINTREE, ESSEX. BLACK NOTLEY HOSPITAL. (544 Beds.) Applications invited for post of HOUSE OFFICER (orthopædic surgery), first, second, or third post. Post tenable for 6 months and is recognised under F.R.C.S. regulations. Salary in accordance with the terms of service issued by the Ministry of Health, plus £50 p.a.

Applications, with copies of 3 testimonials, should be forwarded to the Group Secretary, Colchester Hospital Management Committee, 14, Pope's-lane, Colchester, Essex.

BRAINTREE, ESSEX. BLACK NOTLEY HOSPITAL. (544 Beds.) Applications invited for post of SENIOR HOUSE OFFICER for Surgical Tuberculosis Unit, comprising chiefly orthopædic tuberculosis, genito-urinary tuberculosis, and other non-pulmonary and combined lesions. Post tenable for 1 year. Salary in accordance with the terms of service issued by the Ministry of Health.

Applications, with copies of 3 testimonials, should be forwarded to the Group Secretary, Colchester Hospital Management Committee, 14, Pope's-lane, Colchester, Essex.

BRAINTREE, ESSEX. BLACK NOTLEY HOSPITAL. (544 Beds.) Locum SENIOR HOUSE OFFICER required for Surgical Tuberculosis Unit, comprising chiefly orthopædic tuberculosis, genito-urinary tuberculosis, and other non-pulmonary and combined lesions. Salary in accordance with the terms of service issued by the Ministry of Health.

Applications, with copies of 3 testimonials, should be forwarded to the Group Secretary, Colchester Hospital Management Committee, 14, Pope's-lane, Colchester, Essex.

BURTON-ON-TRENT GENERAL INFIRMARY. (240 acute beds.) ORTHOPÆDIC HOUSE SURGEON (House Officer grading), 35–40 orthopædic beds. Resident appointment. Post vacant end of September. Previous experience in orthopædics not essential.

Applications, with full details, and names for reference, to Secretary.

BRIGHTON, 7. ROYAL SUSSEX COUNTY HOSPITAL. (300 Beds.) CASUALTY HOUSE SURGEON (1 of 3), including duties with Orthopædic and Traumatic Unit. Pre-registration post and recognised for F.R.C.S. from 1954. Vacant early October.

Applications, giving details of age, experience, &c., together with names and addresses of 2 referees, to be sent to the Administrative Officer.

BRISTOL. SOUTHMEAD GENERAL HOSPITAL GROUP MANAGEMENT COMMITTEE. Applications are invited for the following appointments :—

Mortimer House Maternity Hospital, Clifton, Bristol (35 Beds)
SENIOR HOUSE OFFICER (6 or 12 months).

Southmead Hospital, Bristol (571 Beds, including 133 maternity)
SENIOR HOUSE OFFICER (anæsthetics). Post recognised for D.A.
HOUSE OFFICER (anæsthetics). Post recognised for D.A.

Applications to be submitted to the Group Secretary, Southmead Hospital, Bristol.

BRISTOL. COSSHAM FRENCHAY HOSPITAL MANAGEMENT COMMITTEE. FRENCHAY HOSPITAL. Applications are invited from registered practitioners for the post of SENIOR HOUSE OFFICER. The appointment, which will be for 1 year in the first instance, is on the terms and conditions of service for hospital medical staff and is at a salary of £670, less a deduction of £120 p.a. in respect of unmarried accommodation provided at the Hospital. The candidate appointed will have general supervision under the Consultant staff of the beds for general medicine, which at present number 70. As the Senior House Officer he will be in charge of the "House" and his duties will include pre-employment medical examinations of staff appointed by the Hospital Management Committee. It is customary for the resident nursing staff to be invited to register on the patients' panel of the Senior House Officer, who is entitled to retain the appropriate fees receivable. The Hospital is attractively situated on the outskirts of Bristol and has in addition to the general medical and surgical beds, a Nurses' Training School and the specialised departments of neurosurgery, plastic surgery and thoracic surgery serving the South West Regional area. The Hospital is rapidly developing and now provides over 500 staffed beds.

Applications, containing details of qualifications and experience, together with the names of 3 referees, should be forwarded to the Group Secretary, Frenchay Hospital, not later than 12th September, 1953.

BURY AND ROSSENDALE HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICERS (medical). There are 2 vacancies in this Group.
(*a*) for Bury General Hospital.
(*b*) for Rossendale General Hospital.
Applications, giving names of 2 referees, should be made to—
H. WILKINSON, Esq., Group Secretary,
Bury General Hospital, Bury, Lancs.

CARSHALTON, SURREY. QUEEN MARY'S HOSPITAL FOR CHILDREN. (840 Beds.) REGISTRAR (resident) required for medical duties. Applicants are invited to visit the Hospital (which is within easy reach of central London) by appointment.

Applications, on forms obtainable from the Group Secretary, should be returned by 19th September, 1953.

CARSHALTON, SURREY. ST. HELIER HOSPITAL, Wrythe-lane. ST. HELIER GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for 3 posts of CASUALTY OFFICER (Senior House Officer), vacant during September. Salary £670 p.a.

Applications, stating age, qualifications and experience, with copies of 2 testimonials, and the names of 2 referees, should be sent as soon as possible to the Group Secretary, at the above address.

CARDIFF. THE UNITED CARDIFF HOSPITALS. SENIOR HOUSE OFFICER required in the Casualty Department.

Application forms from Secretary, Cardiff Royal Infirmary.

CARDIFF ISOLATION HOSPITAL. Cardiff Hospital MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER (resident) required at above Hospital.

Apply immediately to Group Secretary, 44, Cathedral-road, Cardiff, giving particulars of age, qualifications, experience, &c., and names and addresses of 2 referees.

CAMBRIDGE. ADDENBROOKE'S HOSPITAL. Senior REGISTRAR, Orthopædic and Fracture Department, non-resident, vacant 1st December, 1953. Appointment includes care of inpatients and outpatients at adjacent hospitals and clinics as well as main duties at Addenbrooke's Hospital.

Apply, with full particulars and names of 3 referees, to Secretary, by 30th September.

CAMBRIDGE. EAST ANGLIAN REGIONAL HOSPITAL BOARD. UNITED CAMBRIDGE HOSPITALS. REGISTRAR in Psychiatry at Addenbrooke's Hospital, Cambridge, and at Fulbourn Mental Hospital. This is a trainee post which provides full facilities for clinical work with all types of patients and study for D.P.M. Appointment for 1 year, renewable for second year.

Detailed applications, including age, and names of 3 referees, to Secretary, East Anglian Regional Hospital Board, 117, Chesterton-road, Cambridge, by 21st September, 1953. Candidates invited to visit hospitals by arrangement with the Medical Superintendent, Fulbourn Hospital, Cambridge.

CHESTERFIELD HOSPITAL MANAGEMENT COMMITTEE. Whole-time NON-RESIDENT JUNIOR HOSPITAL MEDICAL OFFICER required for Whittington Hall, Chesterfield (372 female mentally deficient patients), and Scarsdale Hospital, Chesterfield. Salary £700–£50–£1000 p.a.

Apply H. M. BOONE, Secretary, from whom further particulars may be obtained.

CHESTERFIELD. SCARSDALE HOSPITAL. 2 Obstetrical and Gynæcological Senior House Officers required at above Hospital which contains a maternity unit of 72 Beds. The obstetrical post is recognised for M.R.C.O.G. and D.Obst.R.C.O.G. and the gynæcological post for the M.R.C.O.G. only. National salary and conditions. Apply in detail to:— M. H. BOONE, Secretary, Chesterfield Hospital Management Committee.

CHERTSEY, SURREY. ST. PETER'S HOSPITAL. (443 Beds.) The post of SENIOR HOUSE OFFICER in the Gynæcological and E.N.T. Departments is now vacant.

Applications, together with testimonials, or names of referees, should be sent to the Physician-Superintendent as soon as possible.

CHERTSEY, SURREY. ST. PETER'S HOSPITAL (late Botleys Park War Hospital). (443 Beds.) Required, SENIOR HOUSE OFFICER ANÆSTHETIST. Appointment recognised for the D.A. and the F.F.A.R.C.S. Salary in accordance with terms and conditions of National Health Service.

Applications, together with names and addresses of referees, to be sent to the Physician-Superintendent, St. Peter's Hospital, as soon as possible.

CHERTSEY. ST. PETER'S HOSPITAL (late Botleys Park War Hospital) (443 Beds) AND ROYAL SURREY COUNTY HOSPITAL, GUILDFORD (229 Beds). SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. The post of Full-time REGISTRAR to the E.N.T. Departments of the above hospitals will be vacant on 1st October, 1953.

Application forms can be obtained from, and should be returned by 18th September, 1953, to the Secretary, Woking and Chertsey Group Hospital Management Committee, Huntingdon-Guildford-road, Chertsey. The hospitals may be visited by arrangement (Tel. nos.: St. Peter's, Ottershaw 441; Royal Surrey County, Guildford 2323.)

CAMBORNE. TEHIDY HOSPITAL. (189 Beds.) West CORNWALL HOSPITAL MANAGEMENT COMMITTEE. There is a vacancy for a RESIDENT HOSPITAL OFFICER for which applications are invited from registered medical practitioners. Those convalescent from tuberculosis will be favourably considered. A Thoracic Surgical Unit has recently been opened at this Hospital so that wide experience in the medical and surgical treatment of chest conditions is available. The duties also include attendance at weekly meetings of the specialist staff.

Applications to the Hospital Secretary.

CAERNARVON AND ANGLESEY HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the following posts:—

Caernarvon and Anglesey General Hospital, Bangor
HOUSE SURGEON (recognised for F.R.C.S.).

Eryri Hospital, Caernarvon
HOUSE OFFICER.

Llandudno General Hospital, Llandudno
HOUSE SURGEON.

The appointments are for a period of 6 months. Salary and conditions of service in accordance with those approved by the Ministry of Health.

Applications, stating age, qualifications and experience, together with the names and addresses of 2 referees, to be forwarded within 10 days of the appearance of this advertisement to the Group Secretary, Plas Gwyn, Ffriddoedd-road, Bangor.

CAERNARVON AND ANGLESEY HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the following appointment:—

Caernarvon and Anglesey General Hospital, Bangor
HOUSE PHYSICIAN.

The appointment is for a period of 6 months. Salary and conditions of service in accordance with those approved by the Ministry of Health.

Applications, stating age, qualifications and experience, together with the names and addresses of 2 referees, to be forwarded within 10 days of the appearance of this advertisement to the Group Secretary, Plas Gwyn, Ffriddoedd-road, Bangor.

COVENTRY. GULSON HOSPITAL. (329 Beds.) House PHYSICIAN required (House Officer status), vacant 1st November next. Hospital contains 87 general medical beds.

Applications to the Secretary, Group 20, Hospital Management Committee, Stoney Stanton-road, Coventry.

COVENTRY. GULSON HOSPITAL. Senior House OFFICER in Anæsthetics required. Post vacant 30th September. Salary £670 p.a. Recognised for F.F.A.R.C.S. Excellent experience in all types of general anæsthetics.

Applications to the Secretary, Group 20, Hospital Management Committee, Stoney Stanton-road, Coventry.

COVENTRY AND WARWICKSHIRE HOSPITAL. (346 Beds.) RECEIVING-ROOM OFFICER required. Salary £670 p.a. Vacant now. Recognised for F.R.C.S.

Applications to the Secretary, Group 20, Hospital Management Committee, Stoney Stanton-road, Coventry.

COVENTRY AND WARWICKSHIRE HOSPITAL. (346 Beds.) HOUSE SURGEON for Gynæcological and Obstetrical Department required. Post vacant 18th October. Recognised for D.Obst.R.C.O.G. and M.R.C.O.G.

Applications to the Secretary, Group 20, Hospital Management Committee, Stoney Stanton-road, Coventry.

COVENTRY AND WARWICKSHIRE HOSPITAL. (346 Beds.) HOUSE PHYSICIAN required 1st November. Post offers wide experience in general medicine.

Applications to the Secretary, Group 20, Hospital Management Committee, Stoney Stanton-road, Coventry.

COVENTRY AND WARWICKSHIRE HOSPITAL. (346 Beds.) RESIDENT SENIOR HOUSE OFFICER in Anæsthetics required, now vacant. Salary £670 p.a. Hospital recognised for F.F.A.R.C.S. Excellent experience in all types of general anæsthesia.

Applications to the Secretary, Group 20 Hospital Management Committee, Coventry and Warwickshire Hospital, Coventry.

CHELMSFORD HOSPITALS. Applications are invited for the post of RESIDENT ANÆSTHETIST (Senior House Officer) to large Surgical Units, for a period of 12 months, commencing immediately.

Applications, stating age, sex, qualifications and experience, with recent testimonials, should be sent to the Secretary, Hospital Management Committee—Chelmsford Group, Chelmsford and Essex Hospital, London-road, Chelmsford.

CHELMSFORD AND ESSEX HOSPITAL. Applications are invited for the post of CASUALTY OFFICER (Senior House Officer), resident and tenable for 1 year. It offers excellent experience in the treatment of fractures and diagnosis of acute medical and surgical emergencies. Opportunity is given for the Casualty Officer to follow up his cases in the wards and to obtain operating experience in major theatre under the guidance of the Consultants or the Resident Surgical Officer. Off-duty time is generous and the post is one likely to suit both an Officer seeking a higher qualification in surgery or one intending General Practice. The vacancy will occur in September. Salary £670 p.a., with £130 deduction for residential emoluments.

Apply Secretary, Chelmsford Group Hospital Management Committee, Chelmsford and Essex Hospital, London-road, Chelmsford, Essex.

CHESTER. BARROWMORE HOSPITAL, Great Barrow, CHESTER. Male SENIOR HOUSE OFFICER (medical). Post vacant immediately. Salary £670, less £120 p.a. for residence. The Hospital is modern in all respects and contains Regional Thoracic Surgical Unit. Applications from ex-patients considered.

Apply, sending 2 references or names of referees, to Secretary.

CHEPSTOW, MON. MEMORIAL WARDS. (150 Beds.) JUNIOR HOSPITAL MEDICAL OFFICER (tuberculosis) required about 1st October. A Senior Hospital Medical Officer is also resident and the Consultant visits regularly. Hospital situated conveniently on outskirts of town. Salary £700–£50–£1000, less £150 for board-residence.

Write, quoting 2 referees, to T. A. JONES, 64, Cardiff-road, Newport, Mon.

COLCHESTER. ESSEX COUNTY HOSPITAL. (189 Beds.) Applications invited for post of HOUSE OFFICER to Casualty and Radiotherapy Departments at above Hospital. First, second, or third post; tenable for 6 months. Post recognised for F.R.C.S. Salary in accordance with the terms of service issued by the Ministry of Health.

Applications, with copies of 3 testimonials, should be forwarded to the Group Secretary, Colchester Hospital Management Committee, 14, Pope's-lane, Colchester, Essex.

COTTINGHAM. E. YORKS. Senior House Officer for Raywell Sanatorium (48 Beds) and JUNIOR HOSPITAL MEDICAL OFFICER for Castle Hill Sanatorium (221 Beds) to work under supervision of Consultant Chest Physician. Sanatoria part of Group with major Thoracic Surgery and Mass Radiography Units and laboratory facilities.

Application forms from Group Secretary, Hull B Hospital Management Committee, De la Pole Hospital, Willerby, E. Yorkshire.

DARLINGTON MEMORIAL HOSPITAL. Applications are invited from Male or Female practitioners with experience for the post of SURGICAL REGISTRAR (Senior House Officer) which is one of a surgical team of 2 Registrars and 1 House Officer responsible for surgical beds and casualty. The post is recognised for the F.R.C.S.(Eng.). Salary £670 p.a., deduction of £150 p.a. for full residential emoluments. The post is tenable for 12 months and is renewable annually.

Apply with references, stating age and experience, to—
G. W. BECKWITH, Group Secretary.

DARLINGTON MEMORIAL HOSPITAL. (210 Beds.) DARLINGTON DISTRICT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of HOUSE SURGEON (resident), which post is recognised for the F.R.C.S. (Eng.). Salary in accordance with national scale.

Apply, giving age and references, to the undersigned forthwith. G. W. BECKWITH, Group Secretary.

DERBY. DERBYSHIRE ROYAL INFIRMARY. Resident SENIOR HOUSE OFFICER (casualty) required immediately.

Applications, stating full details, together with copies of 2 recent testimonials, should be sent as soon as possible to the Secretary at the Infirmary.

DERBY. DERBYSHIRE ROYAL INFIRMARY. Gynæco-LOGICAL HOUSE SURGEON (pre-registration) or SENIOR HOUSE OFFICER required 18th October, 1953.

Applications, stating full details, with copies of 2 recent testimonials, should be sent as soon as possible to the Secretary at the Infirmary.

DERBY. CITY HOSPITAL. Sheffield Regional Hospital BOARD. Whole-time RESIDENT or NON-RESIDENT MEDICAL REGISTRAR required. Appointment for 1 year in first instance.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 21st September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

DEWSBURY. STAINCLIFFE GENERAL HOSPITAL. (314 Beds.) HOUSE OFFICER (general surgery), first, second, or third post, vacant now and tenable for 6 months. Recognised pre-registration appointment. The Hospital is recognised for the F.R.C.S.

Applications, with full particulars, to the Administrative Officer at the Hospital.

DEWSBURY. STAINCLIFFE GENERAL HOSPITAL. (314 Beds.) Applications are invited for the post of RESIDENT MEDICAL OFFICER (Junior Hospital Medical Officer grade), vacant now. The Hospital has a Medical Unit of 68 adult beds and 34 beds for children. The Resident Medical Officer has 2 resident House Physicians to assist him.

Applications, giving full details of experience, &c., should be addressed to the Group Secretary at 20, Oxford-road, Dewsbury.

DARTFORD HOSPITAL MANAGEMENT COMMITTEE.
SENIOR HOUSE OFFICER (anæsthetics) at Joyce Green Hospital, Dartford.
HOUSE SURGEON (orthopædics) at the Southern Hospital, Dartford.
HOUSE OFFICER (E.N.T. and ophthalmology) at the Southern Hospital, Dartford.
Applications, stating age, qualifications, experience, nationality, and the names of 2 persons to whom reference may be made, to be sent for House Officers to the Medical Superintendent of the hospital concerned, and for Senior House Officer to the Group Secretary, Dartford Hospital Management Committee, the Bow Arrow Hospital, Dartford.

DORKING GENERAL HOSPITAL, Horsham-road, DORKING, SURREY. (252 Beds.) Applications are invited for the post of SENIOR HOUSE OFFICER in Obstetrics and Gynæcology with some general surgery. Vacant 11th September for 1-year appointment (renewable). Post recognised for D.Obst.R.C.O.G.
Apply to the Medical Superintendent.

DOVER. ROYAL VICTORIA HOSPITAL. Applications are invited for the post of HOUSE SURGEON at the above Hospital. The post is recognised by the Royal College of Surgeons. Salary £350, £400, or £450 a year according to experience. A deduction of £100 a year will be made for residential emoluments.
Applications, stating age, qualifications, and the names and addresses of 2 referees, to the Group Secretary, "Ash-Eton," Radnor Park West, Folkestone.

DOVERCOURT, ESSEX. HARWICH AND DISTRICT HOSPITAL. (30 Beds.) Applications invited for appointment of SENIOR HOUSE OFFICER (Resident Surgical Officer). Post tenable for 1 year. Salary in accordance with the terms of service issued by the Ministry of Health.
Applications, with copies of 3 testimonials, should be forwarded to the Group Secretary, Colchester Hospital Management Committee, 14, Pope's-lane, Colchester, Essex.

EDGWARE GENERAL (formerly Redhill County) HOSPITAL, EDGWARE, MIDDLESEX. 2 RESIDENT OBSTETRIC HOUSE SURGEONS required. Posts vacant 11th and 26th October, 1953. Salary £350–£450 p.a., according to experience. Deduction of £100 p.a. for board, lodging, &c. 6 months appointment.
Applications, stating age, qualifications, experience, and enclosing copies of up to 3 recent testimonials, to Medical Director of Hospital by 19th September. Candidates selected for interview will be notified by 26th September.

EDGWARE GENERAL HOSPITAL. (715 Beds.) North WEST METROPOLITAN REGIONAL HOSPITAL BOARD. SENIOR MEDICAL REGISTRAR (whole-time), non-resident, required at above Hospital. Possession of a higher medical qualification essential. Duties will include charge of beds, Outpatient Consultative Clinics and Postgraduate Teaching under supervision of the Physicians. Hospital may be visited by direct appointment with Medical Director.
Application forms obtainable from, and returnable to, Group Secretary, Edgware General Hospital, Edgware, Middlesex, by 15th September, 1953.

EPPING. ST. MARGARET'S HOSPITAL. (485 Beds, 78 general surgical beds.) Applications are invited for post of HOUSE SURGEON becoming vacant 26th September, 1953. Busy general hospital with easy access to London. Salary on national scale less deduction for board, lodging, &c.
Applications, with copies of 2 testimonials, to reach Group Secretary, Epping Group Hospital Management Committee, St. Margaret's Hospital, Epping, Essex, by 12th September, 1953.

EPPING. ST. MARGARET'S HOSPITAL. (485 Beds.) Applications are invited for the post of SENIOR HOUSE OFFICER (pathology) to fill an immediate vacancy. Salary on national scale, less deduction for board, lodging, &c. Busy department in large general hospital, with easy access to London. Some experience in pathological department desirable.
Applications, with copies of 2 recent testimonials, to reach the Group Secretary, Epping Group Hospital Management Committee, St. Margaret's Hospital, Epping, Essex, by 12th September, 1953.

EPSOM, SURREY. WEST PARK HOSPITAL (for all stages of nervous and mental disorder). SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. WEST PARK HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for 3 appointments of REGISTRAR in Psychiatry at above Hospital. Candidates may be of either sex. A house on the Hospital estate or single residential quarters are available.
Applications (5 copies) should be made on forms to be obtained from the Secretary to the Hospital Management Committee at the Hospital, to whom they should be returned within 14 days of the appearance of this advertisement.

ENFIELD, MIDDLESEX. CHASE FARM HOSPITAL. ENFIELD GROUP HOSPITAL MANAGEMENT COMMITTEE. RESIDENT OBSTETRICAL AND GYNÆCOLOGICAL HOUSE SURGEON (second or third post—approved pre-registration post), required 17th October, 1953. R practitioners holding first posts may apply. 6 months appointment. Unit recognised for purposes of D.Obst.R.C.O.G. and M.R.C.O.G. examination, but advertised post is only recognised for D.Obst.R.C.O.G.
Applications, stating age, nationality, qualifications and experience, with the names of 2 referees, to the Secretary, Enfield Group Hospital Management Committee, Chase Farm Hospital, Enfield, by 11th September, 1953.

GATESHEAD-ON-TYNE, COUNTY DURHAM. DUNSTON HILL HOSPITAL. (272 Beds.) Applications are invited for the post of SENIOR HOUSE OFFICER (medical) which provides practical experience in internal medicine. Salary £670 p.a., with a deduction of £130 for residential emoluments.
An application form will be provided on request to Hospital Management Branch, Ministry of Health, Norcross, Blackpool, Lancs.

EAST CUMBERLAND HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the following HOUSE OFFICER appointments which are now vacant :—
Cumberland Infirmary, Carlisle (340 Beds)
1—General Surgery.
1—Orthopædics.
1—" Specials "—(E.N.T. and Eyes).
Applications, with names of 2 referees, should be forwarded immediately to the Secretary, East Cumberland Hospital Management Committee, Cumberland Infirmary, Carlisle.

GLOUCESTER. GLOUCESTERSHIRE ROYAL HOSPITAL. (GREAT WESTERN ROAD UNIT.) (350 Beds.) GYNÆCOLOGICAL HOUSE SURGEON required (£350–£450 p.a.), vacant on or about 29th September. Post recognised for M.R.C.O.G. Also open to pre-registration students to be counted as experience in surgery.
Applications, naming 2 referees, to the Group Secretary, Gloucestershire Royal Hospital, Southgate-street, Gloucester.

GLOUCESTER. GLOUCESTERSHIRE ROYAL HOSPITAL. (CITY MATERNITY HOSPITAL.) (51 Beds.) OBSTETRICAL HOUSE SURGEON required (£350–£450). Post, which is recognised for Pre-registration Service, vacant on or about 7th October, 1953.
Applications, naming 2 referees, to the Group Secretary, Gloucestershire Royal Hospital, Southgate-street, Gloucester.

GLOUCESTER. GLOUCESTERSHIRE ROYAL HOSPITAL. ROYAL INFIRMARY AND CITY GENERAL HOSPITALS. (600 Beds.) RESIDENT ANÆSTHETIST required. 6 months appointment. Post recognised for the D.A. examination. Salary £400–£450 p.a., according to appointments held, less £100 p.a. for residential emoluments.
Applications, naming 2 referees, to the undersigned as soon as possible. C. J. ADAMS, Group Secretary.
Gloucestershire Royal Hospital, Southgate-street, Gloucester.

GLOUCESTER ROYAL HOSPITAL. Southgate-street AND GREAT WESTERN-ROAD BRANCHES. (600 Beds.) Applications are invited for the post of SENIOR RESIDENT ANÆSTHETIST (Senior House Officer grade), which is now vacant. The post, which will be for 1 year, is recognised for the D.A. examination. Salary £670 p.a., less £125 p.a. in respect of residential emoluments.
Applications, giving full details of qualifications, experience, and naming 2 referees, should be forwarded to the Group Secretary, Gloucestershire Royal Hospital, Southgate-street, Gloucester.

GRANTHAM AND KESTEVEN GENERAL HOSPITAL. SHEFFIELD REGIONAL HOSPITAL BOARD. SECOND RESIDENT SURGICAL OFFICER, with duties in Orthopædics, Gynæcology, and E.N.T. and relief duties for Resident Surgical Officer required at Registrar rate of pay. Appointment for 1 year in first instance.
Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 14th September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

GRIMSBY GENERAL HOSPITAL. (220 Beds.) Grimsby HOSPITALS MANAGEMENT COMMITTEE. Applications are invited for the post of SENIOR HOUSE OFFICER (gynæcological), Male or Female, for duties at the above-named Hospital and Scartho Road Infirmary, Grimsby. The post is now vacant.
Applications, with names of 2 referees, to Hospital Secretary, Grimsby General Hospital.

GRIMSBY GENERAL HOSPITAL. Grimsby Hospital MANAGEMENT COMMITTEE. Applications are invited for the post, vacant as from 4th October, 1953, of CASUALTY OFFICER (Senior House Officer).
Applications, giving nationality, age, experience, &c., together with names of 2 referees, should be sent to the Hospital Secretary, Grimsby General Hospital, Grimsby.

GRIMSBY GENERAL HOSPITAL. (Recognised for training for D.A.) SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time RESIDENT REGISTRAR (anæsthetics) required. Appointment for 1 year in first instance.
Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 14th September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

GRIMSBY MATERNITY HOSPITAL. (45 Beds.) Applications are invited for the post of SENIOR OBSTETRIC HOUSE OFFICER (resident), vacant on 31st August, 1953. A large proportion of abnormal cases are treated.
Apply immediately, with names of 2 referees, to the Secretary, Grimsby Hospital Management Committee, 3, Queen's-parade, Grimsby.

GUILDFORD. ROYAL SURREY COUNTY HOSPITAL. (229 Beds.) RESIDENT HOUSE SURGEON required. The post is in general surgery and is recognised for the F.R.C.S. examination, tenable for 6 months and approved for pre-registration practitioners. The vacancy will occur on 1st October.
Applications, with copies of 3 testimonials, should be sent to the Hospital Secretary.

GUILDFORD. ROYAL SURREY COUNTY HOSPITAL. CASUALTY OFFICER required. The grading is that of Senior House Officer, and 2 Casualty Officers are employed who share the work of the department which is part of the Orthopædic and Traumatic Unit. Regular instruction is given in traumatic surgery and Casualty Officers take part in the work of the fracture clinics. Post vacant on 21st September and will be resident for the first 6 months with option of renewal.
Applications, with copies of testimonials, to the Hospital Secretary.

HALIFAX. ROYAL HALIFAX INFIRMARY. (301 Beds.) HOUSE SURGEON required. Post vacant October, 1953. Approved pre-registration appointment. Recognised for F.R.C.S. Diploma.
Applications to Group Secretary, Royal Halifax Infirmary, Halifax.

HALIFAX. ROYAL HALIFAX INFIRMARY. (301 Beds.) OBSTETRIC HOUSE SURGEON required. Post vacant 1st October, 1953. Approved pre-registration appointment and recognised for D.Obst.R.C.O.G.

Applications to Group Secretary, Royal Halifax Infirmary, Halifax.

HALIFAX GENERAL HOSPITAL. (425 Beds.) House SURGEON required. Post now vacant. Approved pre-registration appointment.

Applications to Group Secretary, Royal Halifax Infirmary, Halifax.

HALIFAX AREA HOSPITALS MANAGEMENT COMMITTEE. Applications invited for the post of JUNIOR HOSPITAL MEDICAL OFFICER in Anæsthetics for duty at Royal Halifax Infirmary (301 Beds) and Halifax General Hospital (425 Beds), both busy acute general hospitals.

Applications, to be forwarded to Group Secretary, Royal Halifax Infirmary, Halifax.

HAVERFORDWEST. PEMBROKE COUNTY WAR MEMORIAL HOSPITAL. (151 Beds—Recognised by the Royal College of Surgeons and for Pre-registration Service.) Applications are invited for the post of RESIDENT HOUSE OFFICER (surgical). Salary £350, £400, or £450 p.a., plus grant of £50 p.a., according to experience, less £100 p.a. for board-residence.

Applications, stating age, qualifications, experience, and nationality, with names and addresses of 3 referees, to Group Secretary, West Wales Hospital Management Committee, Glangwili, Carmarthen.

HASTINGS. ROYAL EAST SUSSEX HOSPITAL. (150 Beds.) SENIOR HOUSE OFFICER (casualty and orthopædic), post vacant now. National scale of salary.

Apply to Hospital Administrator.

HERTFORD COUNTY HOSPITAL. (171 Beds. Hospital situated 21 miles from London.) Applications are invited for the appointment of HOUSE PHYSICIAN (Male or Female), second post held. Recognised pre-registration post. 6 months appointment. Preference given to applicants who have held resident surgical or medical posts in general hospital. Salary at rate of £400 p.a., less £100 for residential emoluments. Duties to commence 5th October, 1953.

Applications to Group Secretary, Hertford Hospital Management Committee, County Hospital, Hertford, Herts.

HERTFORD COUNTY HOSPITAL. (171 Beds. Hospital situated 21 miles from London.) Applications are invited for the appointment of HOUSE SURGEON (Male or Female), first or second post held, for general surgery, gynæcology, and obstetrics. Pre-registration post; recognised under F.R.C.S. regulations. 6 months appointment. Salary at rate of £350 or £400 p.a. respectively, less £100 p.a. residential emoluments. Duties to commence as soon as possible.

Applications to the Group Secretary, Hertford Group Hospital Management Committee, Hertford County Hospital, Hertford, Herts.

HEMEL HEMPSTEAD, HERTS. WEST HERTS HOSPITAL. (167 Beds—5 residents.) HOUSE PHYSICIAN to Children's Department required (second or subsequent post). The appointment is recognised for the D.C.H. and falls vacant on 10th September, 1953.

Applications, giving details of experience and qualifications, and enclosing copies of 2 recent testimonials, should be sent to the Administrator.

HITCHIN HOSPITALS, Hitchin, Herts. Applications are invited for the posts of RESIDENT HOUSE SURGEON at the North Herts Hospital, now vacant; and RESIDENT HOUSE SURGEON at the Lister Hospital, vacant 14th September. (Recognised as pre-registration post.)

Applications, stating age, nationality, qualifications, and experience, together with copies of 3 recent testimonials, to be sent to the Medical Director, Lister Hospital, Hitchin, Herts.

HOVE GENERAL HOSPITAL, Sackville-road, Hove, 3. HOUSE SURGEON AND CASUALTY OFFICER (recognised for F.R.C.S.). Post vacant about 7th September. Salary and conditions of service in accordance with national scale (£350–£450, less £100 p.a. for residential emoluments).

Applications, stating age, qualifications, experience, and naming 2 referees, to the Administrative Officer.

HOVE GENERAL HOSPITAL, Sussex. (75 Beds. 3 Resident Medical Officers.) SENIOR HOUSE OFFICER (recognised for the F.R.C.S.), vacant early in October. Duties are mainly those of Resident Surgical Officer. Salary £670 p.a., less £150 for residential emoluments. Appointment for period of 1 year.

Applications, with full particulars of qualifications, experience, &c., with names and addresses of 2 referees, to the Administrative Officer.

HOUNSLOW HOSPITAL, Staines-road, Hounslow, MIDDLESEX. Locum HOUSE SURGEON required immediately at above Hospital. Duties mainly Casualty Department. Salary £8 per week, less a charge for residence.

Candidates who have completed pre-registration apply to Hospital Secretary. Telephone HOUnslow 4448.

HOUNSLOW HOSPITAL, Staines-road, Hounslow, MIDDLESEX (General Acute—81 Beds) invite applications for appointment of RESIDENT HOUSE SURGEON; duties include Casualty Department. 6 months appointment. National Health Service salary and conditions of service.

Applications, stating qualifications, age, &c., with copies of up to 3 recent testimonials or names for reference, to the Hospital Secretary.

HULL B GROUP HOSPITAL MANAGEMENT COMMITTEE. Locum Tenens SENIOR HOUSE OFFICER required for Group Sanatoria, with which are associated major Thoracic Surgery Unit, Mass Miniature Radiography Unit and full laboratory facilities. £13 per week, less board charge.

Apply Group Secretary, De la Pole Hospital, Willerby, E. Yorkshire.

HULL. KINGSTON GENERAL HOSPITAL. (398 Beds.) Applications are invited for the posts of 2 HOUSE PHYSICIANS (recognised pre-registration appointments). Salary £350, £400, or £450, according to experience. The posts are resident and tenable for 6 months.

Applications to be forwarded to the Secretary, Hull A Group Hospital Management Committee.

HULL. KINGSTON GENERAL HOSPITAL. (398 Beds.) Applications are invited for the appointment of SURGICAL HOUSE OFFICER (mainly gynæcology); (recognised pre-registration appointment). Salary £350, £400, or £450 according to experience. The post is resident and tenable for 6 months.

Applications to be forwarded to the Secretary, Hull A Group Hospital Management Committee.

HULL ROYAL INFIRMARY. Applications are invited for the post of HOUSE PHYSICIAN (Sutton Branch Hospital). Recognised for M.D.(Lond.) examination. Salary and conditions of service will be in accordance with the Ministry of Health scale for House Officers. The appointment is tenable for 6 months.

Forms of application from the Secretary, Hull A Group Hospital Management Committee.

HULL. VICTORIA HOSPITAL FOR SICK CHILDREN, Park-street. (143 Beds.) HULL A GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the following:—

HOUSE SURGEON—post now vacant

HOUSE SURGEON—post vacant middle September.

6-monthly term in each case. Both posts count towards D.C.H. qualification. Salary as per Ministry of Health terms of service.

Replies, with testimonials, to be sent to the Hospital Secretary.

HUDDERSFIELD ROYAL INFIRMARY. (312 Beds.) HUDDERSFIELD HOSPITAL MANAGEMENT COMMITTEE. HOUSE SURGEON required to commence duty immediately. Salary in accordance with the terms and conditions of service for hospital medical and dental staffs, with full residential emoluments.

Applications, together with copies of 3 recent testimonials, to be addressed to the undersigned as soon as possible.

H. J. JOHNSON, Secretary to the Management Committee.

The Royal Infirmary, Huddersfield.

HAREFIELD HOSPITAL, Harefield, Middlesex. North WEST METROPOLITAN REGIONAL HOSPITAL BOARD. SENIOR MEDICAL REGISTRAR required at above Hospital. Applicants should hold a higher qualification in medicine and should have experience of the diagnosis and modern methods of treatment of tuberculosis, of general medicine and diseases of children. The successful candidate will work under the supervision of a Physician on wards for the treatment of tuberculosis in women and children and on an observation ward for the diagnosis of diseases of the chest. The post will normally be held for 2 years and the successful candidate will then be given the opportunity of serving for a further 2 years as a Senior Registrar at Uxbridge Chest Clinic, 259, High-street, Uxbridge, Middlesex. Hospital and Clinic may be visited by direct appointment.

Application forms obtainable from, and returnable to, the Secretary, Harefield and Northwood Group Hospital Management Committee, Mount Vernon Hospital, Northwood, Middlesex, by 15th September, 1953.

IPSWICH. EAST SUFFOLK AND IPSWICH HOSPITAL. (360 Beds.) Applications are invited for the post of SENIOR HOUSE SURGEON to the Fracture and Orthopædic Department. The post is graded Senior House Officer and is now vacant. The Department has 2 Consultants, about 60 Beds, and a large outpatients attendance and offers a wide experience.

Applications, stating age, nationality, experience, and copies of 3 recent testimonials, to the Hospital Secretary.

IPSWICH. EAST SUFFOLK AND IPSWICH HOSPITAL. (360 Beds.) Applications are invited for the post of HOUSE SURGEON to the Senior Consultant Surgeon vacant on 12th September, 1953. The post is recognised for the F.R.C.S. examination.

Applications, with copies of recent testimonials, to the Hospital Secretary.

IPSWICH. EAST SUFFOLK AND IPSWICH HOSPITAL. (360 Beds.) Applications are invited for the post of HOUSE SURGEON to the Fracture and Orthopædic Department. Approved pre-registration post.

Applications, stating age, nationality, experience, and copies of recent testimonials, to the Hospital Secretary.

IPSWICH. EAST SUFFOLK AND IPSWICH HOSPITAL. (360 Beds.) Applications are invited for the post of HOUSE SURGEON to the General Consultant Surgeon, vacant on 1st October, 1953. The post is recognised for the F.R.C.S. examinations.

Applications, with copies of recent testimonials, to the Hospital Secretary.

IPSWICH BOROUGH GENERAL HOSPITAL, Heath-road, IPSWICH. Applications are invited for the post of HOUSE SURGEON in the Department of Obstetrics and Gynæcology (48 obstetric beds, 37 gynæcological beds) at this Hospital. The post, which is recognised for pre-registration purposes, is of House Officer grade and normally of 6 months duration. The post is vacant from 6th October, 1953.

Applications and 2 copies of recent testimonials to the Hospital Secretary.

ISLEWORTH. WEST MIDDLESEX HOSPITAL. South WEST MIDDLESEX HOSPITAL MANAGEMENT COMMITTEE. HOUSE OFFICER (preferably second or third post) required for Specials Unit, comprising Plastic, Ophthalmic and E.N.T. Departments.

Applications, stating age, nationality, qualifications with dates, and details of experience, together with copies of up to 3 recent testimonials, to Group Secretary, Management Committee, West Middlesex Hospital, Isleworth, Middlesex, by 15th September, 1953.

ISLEWORTH. WEST MIDDLESEX HOSPITAL. South WEST MIDDLESEX HOSPITAL MANAGEMENT COMMITTEE. HOUSE OFFICER required in General Surgery.

Applications, stating age, nationality, qualifications, with dates, and details of experience, together with copies of up to 3 recent testimonials, to Group Secretary, West Middlesex Hospital, Isleworth, Middlesex, by 15th September, 1953.

ISLEWORTH. WEST MIDDLESEX HOSPITAL. South WEST MIDDLESEX HOSPITAL MANAGEMENT COMMITTEE. HOUSE OFFICER (Pædiatric Unit). Applications invited from registered medical practitioners, Men or Women, who have held previous appointments as House Surgeon and House Physician. Full-time, resident, for term of 6 months in first instance counting towards qualification for D.C.H. Duties include care of newborn and prematures in Maternity Department, care of infants and children in Children's Department, and attendance at Children's Outpatient Clinics.

Applications, stating age, nationality, qualifications with dates, and details of experience, together with copies of up to 3 recent testimonials, to Group Secretary, West Middlesex Hospital, Isleworth, Middlesex, by 15th September, 1953.

KING'S LYNN. WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL. (145 Beds.) EAST ANGLIAN REGIONAL HOSPITAL BOARD. SURGICAL REGISTRAR at above Hospital. An acute hospital providing good experience. Post recognised for F.R.C.S. Appointment for 1 year, renewable for second year.

Applications, stating age, qualifications and details of present and previous appointments, together with names of 3 referees, to Secretary of Board, 117, Chesterton-road, Cambridge, by 14th September, 1953. Candidates invited to visit Hospital by direct arrangement with Hospital Management Committee Secretary at the Hospital.

KEIGHLEY, YORKSHIRE. ST. JOHN'S HOSPITAL. (194 Beds Chronic Sick, 29 Beds Maternity Unit.) JUNIOR HOSPITAL MEDICAL OFFICER. Applications are invited from medical practitioners (registered for not less than 2 years) with possibly, in addition, some duties at the Keighley and District Victoria Hospital, a general hospital of 144 Beds. Accommodation is available for a married Officer at St. John's Hospital. Salary according to scale £700–£50–£1000 p.a., subject to deductions for board, lodging, &c. Appointment initially for 1 year.

Applications, stating age, experience, qualifications, and nationality, and the names of 3 referees, to be forwarded to the undersigned immediately.

J. YOUNG, Group Secretary, Bingley, Keighley,
Skipton and Settle Hospital Management Committee.
St. John's Hospital, Keighley.

KEIGHLEY AND DISTRICT VICTORIA HOSPITAL, KEIGHLEY, YORKSHIRE. (144 Beds.) RESIDENT HOUSE SURGEON (either sex), general surgery and orthopædic (first, second or third post), vacant now. Approved pre-registration appointment. Tenable for 6 months. Practitioners registered before 1st January, 1953, may also apply.

Applications, with full particulars and copies of testimonials, to be sent to—

J. YOUNG, Group Secretary, Bingley, Keighley,
Skipton and Settle Hospital Management Committee.
St. John's Hospital, Keighley.

KINROSS. GLENLOMOND HOSPITAL. (140 tuberculosis beds.)

RESIDENT JUNIOR HOSPITAL MEDICAL OFFICER.
RESIDENT SENIOR HOUSE OFFICER.

Both posts vacant now. A flat is available with 1 of these posts suitable for a married person.

Applications, giving details of experience, and names of 2 referees, should be sent immediately to the Medical Superintendent.

LEASOWE CHILDREN'S HOSPITAL (223 Beds), MORETON, WIRRAL, CHESHIRE. NORTH WIRRAL HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from duly qualified medical practitioners for the post of HOUSE OFFICER at the above Hospital specialising in the treatment of long-term orthopædic, non-pulmonary tuberculous, and general pædiatric conditions. This appointment, vacant 1st January, 1954, gives ample scope to a practitioner reading for a higher qualification. Salary in accordance with National Health Service regulations, i.e., £350, £400, or £450, according to experience.

Applications, giving full details of age, qualifications, and experience, together with the names and addresses of 3 referees, to Hospital Secretary, Leasowe Children's Hospital, Leasowe, Moreton, Wirral, Cheshire.

LEEDS REGIONAL HOSPITAL BOARD Short-term LOCUM TENENS appointments in the Registrar grade are constantly available at hospitals in the area of the Board, particularly in the specialties of General Medicine, General Surgery and Psychiatry.

Suitably experienced practitioners interested in such appointments are invited to communicate with the Secretary, Joint Registrars Committee, Park-parade, Harrogate.

LEEDS REGIONAL HOSPITAL BOARD, invites applications for the post of Locum Tenens REGISTRAR in Orthopædic Surgery for duties at the Huddersfield Royal Infirmary. Required immediately.

Applications should be forwarded to the Secretary, Joint Registrars Committee, Park-parade, Harrogate, as soon as possible.

LEEDS. CHAPEL ALLERTON HOSPITAL. (340 Beds.) REGISTRAR in Surgery. The post, which is now vacant, provides useful experience in general, gastric and orthopædic surgery, including amputations. Excellent facilities are available for the rehabilitation of these cases. Salary is at the usual rate of £775 for the first year, £890 second year, with a deduction for residential emoluments of £130 and £140 a year respectively.

An application form will be provided on request to Hospital Management Branch, Ministry of Health, Norcross, Blackpool, Lancs.

LEEDS. CHAPEL ALLERTON HOSPITAL. (340 Beds.) Applications are invited for the post of SENIOR HOUSE OFFICER (surgical) which provides experience in general and orthopædic surgery and in the rehabilitation of the limbless. Salary £670 p.a., with a deduction of £130 for residential emoluments.

An application form will be provided on request to Hospital Management Branch, Ministry of Health, Norcross, Blackpool, Lancs.

LEEDS. UNITED LEEDS HOSPITALS. Applications are invited for the post of RESIDENT AURAL OFFICER at the General Infirmary, Leeds. The post, which is of Senior House Officer status, will be for a period of 1 year in the first instance.

Applications, stating age, sex, nationality, qualifications, and previous posts with dates, together with the names of 3 referees, to be forwarded to the undersigned not later than 19th September, 1953.

S. CLAYTON FRYERS, Secretary to the Board.
General Infirmary, Leeds, 1.

LEEDS. UNITED LEEDS HOSPITALS. Applications are invited for the post of Locum RESIDENT ANÆSTHETIC OFFICER at the General Infirmary at Leeds. The post, which is of Senior House Officer status, will be for the period 12th–31st October, 1953.

Applications, stating age, qualifications and experience, to be forwarded to the undersigned immediately.

S. CLAYTON FRYERS, Secretary to the Board.
General Infirmary, Leeds, 1.

LEEDS, 9. ST. JAMES'S HOSPITAL. Leeds A Group HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of HOUSE SURGEON (gynæcology), tenable 1st October, 1953. The appointment, although recognised as a pre-registration house post, is suitable for a registered medical practitioner and recognised by the Royal College of Obstetricians and Gynæcologists for Membership.

Applications, with copy of 1 testimonial and names of 2 referees, should be forwarded to the Administrative Medical Officer, St. James's Hospital, Leeds, 9, as soon as possible.

LEICESTER GENERAL HOSPITAL AND ROYAL INFIRMARY. (Recognised training hospital for F.R.C.S.) SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time NON-RESIDENT REGISTRAR (orthopædics) required. Appointment for 1 year in first instance.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 14th September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

LEICESTER (near). CARLTON HAYES HOSPITAL, NARBOROUGH, near LEICESTER. (Recognised for training for D.P.M.) SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time REGISTRAR (psychiatry) required. A house is available if required. Appointment for 1 year in first instance.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 21st September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

LEIGH INFIRMARY, Leigh. (102 Beds.) Wigan and LEIGH HOSPITAL MANAGEMENT COMMITTEE. HOUSE PHYSICIAN (Male or Female) required at the above Hospital, House Officer grade post, now vacant. Approved pre-registration post.

Applications, stating age and qualifications, together with the names of 2 referees, should be forwarded to the Secretary, Wigan and Leigh Hospital Management Committee, Knowsley House, Wigan, as early as possible.

LINCOLN. COUNTY HOSPITAL. (Recognised for training for F.R.C.S.) SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time RESIDENT REGISTRAR (orthopædics) required. Appointment for 1 year in first instance.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 14th September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

LINGFIELD EPILEPTIC COLONY. Medical Officer required, married man preferred. Salary £550–£50–£850, plus house and emoluments.

Apply for particulars and form of application to the Medical Superintendent, Epileptic Colony, Lingfield, Surrey.

LICHFIELD (near). ST. MATTHEW'S HOSPITAL, BURNTWOOD, near LICHFIELD, STAFFS. Applications are invited for the appointment of JUNIOR HOSPITAL MEDICAL OFFICER (psychiatry) at the above Hospital (1200 Mental beds). Married quarters available.

Applications, with full details and copies of recent testimonials, to Medical Superintendent.

LIVERPOOL. THE UNITED LIVERPOOL HOSPITALS. Applications are invited for posts of CASUALTY OFFICERS (House Officer grade) for the period 1st September, 1953 (or as soon thereafter as possible), to 28th February, 1954, at :—

Royal Southern Hospital.
Royal Liverpool Children's Hospital.

The posts are open to registered practitioners (resident or non-resident) and pre-registration applicants.

Apply as soon as possible with full details to the Secretary, The United Liverpool Hospitals, 80, Rodney-street, Liverpool, 1.

LIVERPOOL. THE UNITED LIVERPOOL HOSPITALS. Applications are invited for posts of ORTHOPÆDIC HOUSE SURGEONS at :—

David Lewis Northern Hospital,*
Royal Liverpool Children's Hospital.

for the period 1st September, 1953 (or as soon thereafter as possible), to 28th February, 1954. The posts are open to registered practitioners or pre-registration applicants. The person appointed to the post marked * will be required to undertake some casualty work as part of his normal duties.

Apply as soon as possible with full details to the Secretary, The United Liverpool Hospitals, 80, Rodney-street, Liverpool, 1

LIVERPOOL. THE UNITED LIVERPOOL HOSPITALS. ROYAL LIVERPOOL CHILDREN'S HOSPITAL. Applications are invited for a post of HOUSE SURGEON for period 1st September, 1953 (or as soon thereafter as possible), to 28th February, 1954. The post is open to registered practitioners and pre-registration applicants.

Apply as soon as possible with full details to the Secretary, The United Liverpool Hospitals, 80, Rodney-street, Liverpool, 1.

LIVERPOOL, 6. NEWSHAM GENERAL HOSPITAL. Applications are invited from registered medical practitioners (Male or Female) for posts as SENIOR HOUSE OFFICERS (medical). The candidates appointed may be resident or non-resident, and duties will be in both acute and chronic medical wards. Salary will be £670 p.a., subject to a deduction of £130 p.a. if the candidate appointed is resident.

Applications on forms obtainable from the undersigned, to be returned completed within 10 days of the appearance of this advertisement. H. BLYTHE, Group Secretary.

Broadgreen Hospital, Liverpool, 14.

LIVERPOOL, 9. WALTON HOSPITAL. Applications are invited for the post of SENIOR HOUSE OFFICER in Pathology, which is vacant from 1st October, 1953.

Applications to be sent to Physician-Superintendent.

LOUTH, LINCS. COUNTY INFIRMARY. (200 Beds.) Applications are invited for the post of SENIOR HOUSE OFFICER (surgical) or JUNIOR HOUSE OFFICER (pre-registration), at this busy General Hospital. The post is resident, and appropriate deductions will be made in respect of board, residence, &c.

Applications, giving full particulars, together with names of 2 referees, to be addressed to the Hospital Secretary.

LOWESTOFT AND NORTH SUFFOLK HOSPITAL. LOWESTOFT. (99 Beds.) Applications are invited for the appointment of SENIOR HOUSE SURGEON. Salary £670 p.a., less £150 for residential emoluments. The Hospital is staffed by Consultant General Surgeons and visiting Consultants in all specialties from the Norfolk and Norwich Hospital.

Applications, stating age, qualifications and experience, with names of 2 referees, to Hospital Secretary immediately.

MAIDSTONE. KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL. (113 Beds.) MID-KENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of SENIOR HOUSE OFFICER in the Ophthalmic Department of the above Hospital. The Hospital is recognised by the Examining Boards for the F.R.C.S. and the D.O. Appointment will be for 12 months. Salary £670 a year, less £150 a year for residential emoluments.

Applications should be forwarded as soon as possible to the Administrative Officer, Kent County Ophthalmic and Aural Hospital, Church-street, Maidstone.

MAIDSTONE (near). LENHAM SANATORIUM. (172 Beds.) MID-KENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of SENIOR HOUSE OFFICER at Lenham Sanatorium, near Maidstone. The Sanatorium has 172 Beds for the treatment of pulmonary tuberculosis. Salary £670 a year, with a deduction of £150 a year for residential emoluments. Appointment for 12 months.

Applications to Physician-Superintendent, Lenham Sanatorium, near Maidstone.

MAIDSTONE. WEST KENT GENERAL HOSPITAL. (135 Beds.) MID-KENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of SENIOR HOUSE SURGEON. Post recognisable for the F.R.C.S.(Eng.). Salary £670 a year, with deduction of £150 a year for residential emoluments.

Applications to the Administrative Officer at the Hospital as soon as possible.

MIDDLESBROUGH GENERAL HOSPITAL, Ayresome Green-lane, MIDDLESBROUGH. (350 Beds.) TEES-SIDE HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from registered medical practitioners for the post of HOUSE PHYSICIAN (pædiatrics) at the above Hospital. The Pædiatric Unit is a very active one of 60 Beds and Cots for acute cases and a busy Outpatient Department. The post is recognised for Pre-registration Service and for the D.C.H. examination.

Applications, stating age, qualifications, experience, and names for reference, should be forwarded, as soon as possible, to the Hospital Secretary.

MANCHESTER. WEST MANCHESTER HOSPITAL MANAGEMENT COMMITTEE. PARK HOSPITAL, DAVYHULME. (General Hospital—426 Beds.)

1 SENIOR HOUSE OFFICER (general surgery). Post now vacant.

1 SENIOR HOUSE OFFICER (non-tuberculous thoracic surgery) for Manchester Regional Hospital Board Centre. Post vacant mid-October, 1953.

1 HOUSE OFFICER (E.N.T. surgery). (Pre-registration.) Post now vacant.

General surgery posts recognised for F.R.C.S. examination.

Forms from Secretary.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the resident post of REGISTRAR in Gynæcology and Obstetrics, to the Blackpool and Fylde Group of hospitals, with main duties at Victoria Hospital, Blackpool. Post recognised for M.R.C.O.G.

Applications, together with copies of 2 recent testimonials, should be sent to the Group Secretary, Blackpool and Fylde Hospital Management Committee, Victoria Hospital, Blackpool.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the post of REGISTRAR (resident or non-resident) in E.N.T. Surgery to the Wigan and Leigh Group of hospitals with main duties at the Royal Albert Edward Infirmary, Wigan.

Application should be made immediately to the Secretary, Wigan and Leigh Hospital Management Committee, Knowsley House, Wigan, together with the names of 2 referees.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the post of RESIDENT REGISTRAR in General Surgery at the Royal Albert Edward Infirmary, Wigan. Applicants must have had surgical experience and preferably hold a higher surgical qualification. The person appointed will be required to perform duties of Resident Surgical Officer at the Hospital (200 acute general beds). The post is recognised for the F.R.C.S. examinations.

Applications, stating age, nationality, qualifications and experience, together with the names and addresses of 2 referees, should be sent immediately to the Secretary, Wigan and Leigh Hospital Management Committee, Knowsley House, Wigan.

MANCHESTER REGIONAL HOSPITAL BOARD invite applications for the post of RESIDENT REGISTRAR in the Board's Non-tuberculous Thoracic Surgery Unit of 48 Beds at Park Hospital, Davyhulme. 1 year appointment, renewable. Post now vacant.

Application forms from the Secretary, West Manchester Hospital Management Committee, Park Hospital, Davyhulme, Urmston.

MANCHESTER. UNITED MANCHESTER HOSPITALS. SAINT MARY'S HOSPITALS. FIRST ASSISTANT (Registrar grade). There is an immediate vacancy in this grade and applications are invited from suitable candidates. (Salary at national scale.) There is an establishment of 4 "First Assistants"—2 of Senior Registrar grade, and 2 of Registrar grade. Initially the appointment will be for 1 year, renewable normally for a second year. The post is non-resident. The duties include very considerable clinical responsibility for obstetrical and gynæcological cases, including cases dealt with in the "Flying Squad" service. The supervision of house officers and some teaching of undergraduate medical students are also involved. Candidates must therefore have had full previous experience in obstetrics and gynæcology. A higher qualification is desirable.

Forms of application may be obtained from the undersigned. The closing date is 21st September, 1953.

A. R. WISE, General Superintendent.

Saint Mary's Hospitals, Whitworth Park, Manchester, 13.

MANCHESTER. UNITED MANCHESTER HOSPITALS. MANCHESTER ROYAL EYE HOSPITAL. Applications are invited for the post of REGISTRAR (resident). Tenable for 12 months subject to renewal. Previous experience in ophthalmology essential. The terms and conditions of service for hospital medical and dental staffs will apply.

Application forms may be obtained from the undersigned.

H. R. NORTH, General Superintendent.

MANCHESTER. UNITED MANCHESTER HOSPITALS. MANCHESTER ROYAL INFIRMARY, MANCHESTER, 13. 3 SENIOR SURGICAL HOUSE OFFICERS, to commence on 18th and 22nd December, 1953, and 1st January, 1954. Whole-time, non-resident, surgical training posts. Duties include those of Orthopædic Casualty Officer, Outpatient Junior Surgical Registrar and Senior House Officer to a Surgical Unit. The appointments are for 6 months, renewable for a second 6 months, at a salary of £670 p.a.

Applications to be made on forms obtainable from the undersigned and to be returned not later than 16th September, 1953.

G. H. TAYLOR, Secretary.

MANCHESTER. UNITED MANCHESTER HOSPITALS. MANCHESTER ROYAL INFIRMARY, MANCHESTER, 13. RESIDENT SURGICAL OFFICER (Registrar grade) to commence as soon as possible. Applicants must possess higher qualifications. Appointment for 12 months, renewable. A salary deduction at the rate of £130 p.a. will be made in respect of board and lodging and other services provided.

Applications to be made on forms obtainable from the undersigned and to be returned not later than 16th September, 1953.

G. H. TAYLOR, Secretary.

MANSFIELD AND DISTRICT GENERAL HOSPITAL. (207 Beds.) MANSFIELD HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of SENIOR HOUSE OFFICER in Anæsthetics (resident). The post is recognised for the D.A. Appointment will be for 1 year. Salary £670 p.a., with a deduction of £135 in respect of residential emoluments.

Applications, stating age, qualifications and experience, together with copies of 2 testimonials, should be forwarded to the undersigned immediately.

A. ASHWORTH, Group Secretary,
Mansfield Hospital Management Committee.

Oak Bank, Crow Hill-drive, Mansfield.

MANSFIELD AND DISTRICT GENERAL HOSPITAL. (207 Beds.) MANSFIELD HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of HOUSE SURGEON (pre-registration or Senior House Officer post). Post recognised for F.R.C.S. examinations.

Applications, stating age and qualifications, together with copies of 2 recent testimonials, to be forwarded to Group Secretary, Mansfield Hospital Management Committee, Crow Hill-drive, Mansfield.

MANSFIELD. RANSOM SANATORIUM. Nottingham NO. 5 HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the resident post of SENIOR HOUSE OFFICER with effect from 1st November, 1953. The Sanatorium contains 185 Beds for the treatment of pulmonary tuberculosis in men, women, and children, including a modern Thoracic Surgery Unit. Salary £670 p.a., less £150 for full residential emoluments, which include a comfortable flat.

Applications, stating age, qualifications, and experience, and enclosing copies of 2 recent testimonials, to be sent to the Group Secretary, Harlow Wood Hospital, near Mansfield.

NEWTON ABBOT HOSPITAL. (General Section—65 Beds.) RESIDENT HOUSE SURGEON (Male or Female) required for 1st October, 1953. Married quarters available.

Applications, stating qualifications, nationality, age, with copy testimonials, to be sent to the Group Secretary, Torquay District Hospital Management Committee, 62/64, East-street, Newton Abbot, S. Devon.

MITCHAM JUNCTION, SURREY. WANDLE VALLEY HOSPITAL. ST. HELIER GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications invited for the appointment of RESIDENT SENIOR HOUSE OFFICER (medical), vacant now. The Hospital contains 140 Beds for infectious diseases and geriatric cases.

Applications, stating age, qualifications, and experience, with copies of 2 testimonials, and the name of 1 referee, should be sent immediately to the Group Secretary, St. Helier Hospital, Carshalton, Surrey.

NOTTINGHAM GENERAL HOSPITAL. Applications are invited from registered medical practitioners for the post of ORTHOPÆDIC AND FRACTURE SENIOR HOUSE OFFICER. The post offers exceptional experience in traumatic and orthopædic surgery. Duties to commence as soon as possible. Salary and conditions of service in accordance with Ministry regulations. If resident £150 deducted for emoluments.

Applications, stating age, qualifications and experience, together with copies of testimonials, to be sent to—

HENRY M. STANLEY, Secretary.

NOTTINGHAM GENERAL HOSPITAL. Applications are invited for the post of RESIDENT CLINICAL PATHOLOGIST (Senior House Officer grade), vacant 1st October. Previous experience in pathology not essential. Opportunities for training in all branches of clinical pathology are afforded in a Department serving over 1200 Beds. Salary and conditions of service in accordance with Ministry regulations.

Applications, stating age, qualifications and experience, together with names and addresses of referees, to be sent to the undersigned immediately.

HENRY M. STANLEY, Group Secretary.

NOTTINGHAM GENERAL HOSPITAL. Resident House SURGEON required (Male or Female) for the above Hospital. Duties to commence on or about 1st September, 1953. Salary and conditions of service in accordance with published regulations. If held by R practitioner the appointment will be for a period of 6 months.

Applications, stating age, qualifications, and experience, together with copies of testimonials, to be sent to—

HENRY M. STANLEY, Group Secretary.

NOTTINGHAM GENERAL HOSPITAL. Applications are invited from registered medical practitioners (Male or Female) for the appointment of RESIDENT ANÆSTHETIC SENIOR HOUSE OFFICER; duties to commence on or about 1st October. Terms and conditions of service in accordance with the published regulations of the Ministry of Health. £150 deducted for emoluments.

Applications, stating age, qualifications, and experience, together with copies of testimonials, to be sent to the undersigned as soon as possible. HENRY M. STANLEY, Group Secretary.

NORTH SHIELDS. TYNEMOUTH VICTORIA JUBILEE INFIRMARY. (109 Beds.) Hawkey's-lane, NORTH SHIELDS, NORTHUMBERLAND. 1 RESIDENT HOUSE SURGEON appointment available now.

Applications to House Governor.

NEWCASTLE. THE UNITED NEWCASTLE UPON TYNE HOSPITALS. ROYAL VICTORIA INFIRMARY. Applications are invited for the whole-time post of SENIOR REGISTRAR in the Department of Radiotherapy. Candidates should hold a recognised Diploma in Radiotherapy or a higher qualification in medicine or surgery.

Applications, giving full details, and the names and addresses of 3 referees, should be sent to the undersigned within 2 weeks of the appearance of this advertisement.

A. W. SANDERSON, House Governor and Secretary.
Royal Victoria Infirmary, Newcastle upon Tyne.

NEWCASTLE. THE UNITED NEWCASTLE UPON TYNE HOSPITALS. Applications are invited for the appointment of Whole-time NON-RESIDENT SENIOR REGISTRAR in Radiology. Applicants should have spent at least 2 years as Registrar in Diagnostic Radiology and should be in possession of the D.M.R. (Diagnostic). The appointment will be for 1 year in the first instance and will be subject to terms and conditions of service of hospital medical and dental staffs in the National Health Service. The successful candidate will work for the first year in the Royal Victoria Infirmary, and in any subsequent reappointment he may be seconded for special experience to hospitals under the Newcastle Regional Hospital Board. He will be required to live in Newcastle upon Tyne and will be expected to work for a higher qualification—e.g., F.F.R.

Applications, giving full details, and the names and addresses of 3 referees, should be sent to the undersigned within 2 weeks of the date of appearance of this advertisement.

A. W. SANDERSON, House Governor and Secretary.

NEWCASTLE GENERAL HOSPITAL. (861 Beds.) NEWCASTLE UPON TYNE HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER or HOUSE PHYSICIAN required to work in the Neurological Unit under the direction of Mr. G. F. Rowbotham, F.R.C.S. Early application is advised.

Applications should be addressed to the Secretary, Newcastle General Hospital, Westgate-road, Newcastle upon Tyne, 4, together with 1 copy of 2 recent testimonials by 10th September, 1953.

NEWCASTLE UPON TYNE HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from registered medical practitioners for the post of SENIOR HOUSE OFFICER (preferably resident) for the Eye Hospital and the Eye Unit at Walker Accident Hospital. The Eye Hospital has 34 Beds, with a very busy Outpatient Clinic and is recognised for the Diploma in Ophthalmology. Walker Accident Hospital has 21 Beds. Previous experience in ophthalmology will be an advantage, but is not essential. Salary in accordance with the terms and conditions of service of hospital medical and dental staffs.

Applications, with the names of 3 referees, should be sent to the Hospital Secretary, Eye Hospital, St. Mary's-place, Newcastle upon Tyne, 1, as soon as possible.

NEWCASTLE REGIONAL HOSPITAL BOARD. New-CASTLE UPON TYNE HOSPITAL MANAGEMENT COMMITTEE. NEWCASTLE GENERAL HOSPITAL. (861 Beds.) REGISTRAR ANÆSTHETIST (whole-time) required for the above Hospital. Appointment up to 31st August, 1954, in the first instance. Salary scale £775–£890 p.a. This Hospital Group is recognised for the D.A. Single accommodation available.

Applications, together with names and addresses of referees (preferably), or testimonials, to a total of 3, to be sent to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, within 14 days.

NEWCASTLE REGIONAL HOSPITAL BOARD. New-CASTLE UPON TYNE EYE HOSPITAL (34 Beds) AND WALKER ANNEXE (21 Beds). REGISTRAR OPHTHALMOLOGIST (preferably resident). Appointment up to 31st August, 1954, in the first instance, and may be renewed for a further 12 months. Salary scale £775–£890.

Applications, together with names and addresses of referees (preferably), or testimonials to a total of 3, to be sent to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, within 14 days.

NEWCASTLE REGIONAL HOSPITAL BOARD. Dar-LINGTON HOSPITAL MANAGEMENT COMMITTEE. REGISTRAR ORTHOPÆDIC SURGEON (whole-time), resident or non-resident. Appointment up to 31st August, 1954, in the first instance and may be renewed for a further period. Salary £775–£890 p.a.

Applications, together with names and addresses of referees (preferably), or testimonials, to a total of 3, to be addressed to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, within 14 days.

NEWCASTLE REGIONAL HOSPITAL BOARD. Sedge-FIELD HOSPITAL MANAGEMENT COMMITTEE GROUP. REGISTRAR OBSTETRICIAN AND GYNÆCOLOGIST (whole-time), resident. Post linked with Tees-side clinical team. Salary £775–£890 p.a. Appointment up to 31st August, 1954, in the first instance and may be renewed for a further year. A modern self-contained unfurnished flat (5 rooms) will be available.

Applications, together with names and addresses of referees (preferably), or testimonials to a total of 3, to be sent to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, within 14 days.

NEWCASTLE REGIONAL HOSPITAL BOARD. Sunder-LAND AREA HOSPITAL MANAGEMENT COMMITTEE. REGISTRAR PHYSICIAN (whole-time) in the Geriatric Unit, Sunderland General Hospital, &c., in the above Group. Non-resident, but accommodation available for single person. Appointment up to 31st August, 1954, in the first instance. Salary £775–£890 p.a.

Applications, together with names and addresses of referees (preferably), or testimonials, to a total of 3, to be sent to the Senior Administrative Medical Officer, "Blythswood South," Osborne-road, Newcastle upon Tyne, 2, within 14 days.

NEWPORT, I.W. ST. MARY'S HOSPITAL. (365 Beds.) ISLE OF WIGHT GROUP HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER in Surgery. Salary £670 p.a. Applications are invited from registered medical practitioners.

HOUSE SURGEON. Post approved for Pre-registration Service. National salary scale and conditions. Vacant now.

Applications, stating age, nationality, qualifications, and experience, together with the names of 2 referees, to be sent as soon as possible to Group Secretary, Hospital Management Committee Headquarters, Clatterford House, Carisbrooke, I.W.

NORWICH. NORFOLK AND NORWICH HOSPITAL. (440 Beds.) EAST ANGLIAN REGIONAL HOSPITAL BOARD. ORTHOPÆDIC REGISTRAR. Post provides wide experience.

Applications, stating age, qualifications, and details of present and previous appointments, with names of 3 referees, to Secretary of Board, 117, Chesterton-road, Cambridge, by 21st September, 1953. Candidates invited to visit Hospital by direct arrangement with Hospital Management Committee Secretary at the Hospital.

NORWICH. NORFOLK AND NORWICH HOSPITAL. (440 Beds.) EAST ANGLIAN REGIONAL HOSPITAL BOARD. SURGICAL REGISTRAR. Post provides wide experience and recognised for F.R.C.S.

Applications, stating age, qualifications, and details of present and previous appointments, together with names of 3 referees, to Secretary of Board, 117, Chesterton-road, Cambridge, by 21st September, 1953. Candidates invited to visit Hospital by direct arrangement with Hospital Management Committee Secretary at the Hospital.

NORWICH. NORFOLK AND NORWICH HOSPITAL. (440 Beds.) Applications are invited for the appointment of SENIOR HOUSE SURGEON to the Orthopædic Department. Salary £670 p.a., less £150 p.a. for full residential emoluments.

Applications, stating age, qualifications, experience, with names of 2 referees, to Secretary, Group 6 Hospital Management Committee, St. Stephen's-road, Norwich.

NORWICH. NORFOLK AND NORWICH HOSPITAL. PÆDIATRIC DEPARTMENT AT THE JENNY LIND HOSPITAL FOR CHILDREN. Applications are invited for the appointment from 23rd September, 1953, of HOUSE SURGEON (Male or Female) in the Surgical Section of the Jenny Lind Hospital, which forms the entire Pædiatric Department of the United Norwich Hospitals. The post is recognised under the Medical Act, 1950, for Pre-registration Service. The duties are under the direct supervision of the Consultant staff of the Norfolk and Norwich Hospital. Salary £350, £400, or £450, less £100 p.a. for residential emoluments.

Applications, stating age, qualifications and experience, with names of 2 referees, to Secretary, Group 6 Hospital Management Committee, St. Stephen's-road, Norwich.

NUNEATON. GEORGE ELIOT HOSPITAL. (289 Beds.) HOUSE SURGEON required for Gynæcological and Obstetrical Department of 64 Beds. Post vacant 30th September, recognised for pre-registration, D.Obst.R.C.O.G. and M.R.C.O.G.

Applications to the Hospital Secretary.

NUNEATON. MANOR HOSPITAL. (139 Beds.) House SURGEON required for general surgical duties including E.N.T. and ophthalmic work. Recognised for F.R.C.S. and pre-registration.

Applications to the Hospital Secretary.

NUNEATON. MANOR HOSPITAL. (139 Beds.) Applications are invited for the post of HOUSE PHYSICIAN (32 general medical beds), vacant now. Pre-registration post.

Applications to the Hospital Secretary.

NORTHAMPTON. MANFIELD ORTHOPÆDIC HOSPITAL. (200 Beds.) NORTHAMPTON AND DISTRICT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of ORTHOPÆDIC SENIOR HOUSE OFFICER (resident), vacant now. The appointment will be for about 1 year. Salary £670 p.a., with a deduction of £100 p.a. for residential emoluments. The post provides experience in a wide range of orthopædic treatment, including outpatient clinics.

Applications, stating age, nationality, qualifications and experience, together with copies of testimonials, should be sent immediately to the Secretary, Northampton Management Committee, General Hospital, Northampton.

NORTHALLERTON. FRIARAGE HOSPITAL. NORTHALLERTON HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of RESIDENT HOUSE PHYSICIAN at the above Hospital, a general hospital of 300 Beds. Post approved for pre-registration.

Applications, together with names of 2 referees, to the Secretary, Friarage Hospital, Northallerton, Yorks.

NORTHALLERTON. FRIARAGE HOSPITAL. NORTHALLERTON HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of RESIDENT HOUSE SURGEON (orthopædic) at the above Hospital, a general hospital of 300 Beds. Post approved for pre-registration.

Applications, together with names of 2 referees, to the Secretary, Friarage Hospital, Northallerton, Yorks.

ORPINGTON HOSPITAL. Orpington and Sevenoaks HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (Male) to the Geriatric Unit at above Hospital. This is an active specialised Unit for the study of geriatric conditions and modern care and treatment of such patients, and is also associated with Bromley Group of hospitals. The post offers excellent opportunity for studying for higher qualifications, and all auxiliary departments and facilities of a large general hospital (311 acute, 60 tuberculosis and 275 geriatric beds) are at the disposal of Geriatric Unit.

Apply, stating age, qualifications and experience, together with names and addresses of 2 referees, to Physician-Superintendent, Orpington Hospital, Orpington, Kent.

OXFORD REGIONAL HOSPITAL BOARD. Applications are invited from registered medical practitioners for the whole-time post of SENIOR REGISTRAR in Psychiatry at St. Crispin Hospital, Duston, Northampton. Married accommodation is available. Subject to satisfactory service the successful applicant may be able, after 2 years, to transfer to the Warneford or Littlemore Mental Hospitals at Oxford, where there are excellent facilities for postgraduate study. Applicants should hold the D.P.M.

Applications on forms obtainable from the Secretary, Registrar Committee, 43, Banbury-road, Oxford, should reach him by 19th September.

PLYMOUTH. SOUTH DEVON AND EAST CORNWALL HOSPITAL. Applications are invited from registered medical practitioners for the appointments of :—

(1) SENIOR HOUSE OFFICER in Surgery, Devonport Section, recognised for the Fellowship of the Royal College of Surgeons, vacant 8th December, 1953.

(2) HOUSE SURGEON, Devonport Section, vacant 1st December, 1953.

(3) SENIOR HOUSE OFFICER in Surgery, Greenbank Road Section, vacant 9th October, 1953, recognised for the Fellowship of the Royal College of Surgeons.

(4) SENIOR HOUSE OFFICER in Casualty and Fracture Department, Greenbank Road Section, vacant immediately.

(5) RESIDENT DENTAL HOUSE SURGEON, Greenbank Road Section, vacant 21st November, 1953, recognised by the Royal College of Surgeons as fulfilling the requirements of candidates for the Fellowship of Dental Surgery.

(6) HOUSE SURGEONS, Greenbank Road Section, vacancies 13th September, 17th and 20th October, 1953, recognised for the Fellowship of the Royal College of Surgeons.

(7) RESIDENT ANÆSTHETIST, Greenbank Road Section, vacant immediately, recognised for the D.A.

(8) SENIOR HOUSE OFFICER in Surgery, Freedom Fields Section, vacant immediately, recognised for the Fellowship of the Royal College of Surgeons.

(9) SENIOR HOUSE OFFICER to Casualty and Traumatic Department, Freedom Fields Section, vacant immediately.

(10) HOUSE PHYSICIAN, Freedom Fields Section, vacant 1st January, 1954.

(11) HOUSE SURGEON in Obstetrics, Alexandra Maternity Home, Devonport, vacant immediately.

(12) HOUSE SURGEON in Obstetrics and Gynæcology, South Devon and East Cornwall Hospital, Plymouth, vacant 14th November, 1953, recognised for the Membership of the Royal College of Obstetricians and Gynæcologists.

Applications, stating age, nationality, qualifications, and experience, with the names of 3 referees, to be sent to the undersigned as soon as possible.

ARTHUR R. CASH, Group Secretary.

7, Nelson-gardens, Stoke, Devonport.

PONTYPOOL AND DISTRICT HOSPITAL, Pontypool, MON. (115 Beds.) JUNIOR HOSPITAL MEDICAL OFFICER (surgical). This is the senior resident post. 2 House Surgeons and a House Physician also resident. Salary £700–£50–£1000, less £150 board-residence.

Write, quoting 2 referees, to T. A. JONES.

64, Cardiff-road, Newport, Mon.

PONTYPRIDD (near). EAST GLAMORGAN HOSPITAL, CHURCH VILLAGE, near PONTYPRIDD. (316 Beds. Committee's Base Hospital serving population of 177,000. Recognised for the D.Obst.R.C.O.G., D.C.H., and D.A.) PONTYPRIDD AND RHONDDA HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER (surgical).

Applications, stating age, qualifications and experience, together with copies of 2 recent testimonials, to be sent as soon as possible to the Group Secretary, Pontypridd and Rhondda Hospital Management Committee, Courthouse-street, Pontypridd.

PONTEFRACT AND CASTLEFORD HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER (pædiatrics) required for duties at Pontefract and Wakefield. Post recognised for Diploma in Child Health, and provides good experience for those going into general practice. Residence optional, but required to live in Wakefield area. Salary £670, less £130 if resident. Vacant 20th September.

Applications to Hospital Management Committee Secretary, Gt. Northern House, Salter-row, Pontefract, Yorkshire.

PORTSMOUTH GROUP HOSPITAL MANAGEMENT COMMITTEE. INFECTIOUS DISEASES HOSPITAL. (310 Beds.) Applications are invited for the appointment of SENIOR HOUSE PHYSICIAN, whose work will comprise duties in both infectious diseases and tuberculosis wards.

Applications, stating age, experience, and qualifications, and names of 2 referees, should be submitted as soon as possible to—

35, Grove-road South, Southsea. E. H. HURST.

PORTSMOUTH GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of SURGICAL REGISTRAR at St. Mary's Hospital, Portsmouth (150 acute surgical beds), vacant 10th September, 1953. The successful candidate must hold the F.R.C.S. degree. The post will include duties in the Department of Thoracic Surgery (18 Beds).

Forms of application may be obtained from the Secretary, Portsmouth Group Hospital Management Committee, 35, Grove-road South, Southsea, which should be returned to him duly completed on or before 18th September, 1953. Canvassing will disqualify. Candidates may visit the above Hospital by arrangement with the Group Secretary.

PARKSTONE. ALDERNEY INFECTIOUS DISEASES HOSPITAL. BOURNEMOUTH AND EAST DORSET HOSPITAL MANAGEMENT COMMITTEE. HOUSE PHYSICIAN required (Male or Female). Post vacant 28th September, 1953.

Applications to Hospital Secretary.

PENZANCE. WEST CORNWALL HOSPITAL. (General —100 Beds.) WEST CORNWALL HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from pre-registration graduates or qualified medical practitioners for the post of HOUSE SURGEON.

Applications, stating age, nationality, qualifications and experience, and enclosing copies of 2 recent testimonials, should be forwarded to the Hospital Secretary, West Cornwall Hospital, Penzance.

PENZANCE. WEST CORNWALL HOSPITAL. (100 Beds —3 Residents.) WEST CORNWALL HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER (surgical) required. Post vacant 1st September. Good and varied experience in diagnosis, treatment and operative procedure.

Applications, stating age, experience and nationality, to the Hospital Secretary, West Cornwall Hospital, Penzance.

READING. ROYAL BERKSHIRE HOSPITAL. (403 Beds.) Applications are invited for the appointment, House Officer grade, of RESIDENT ASSISTANT PATHOLOGIST, vacant 16th October, for period 6 months. Previous experience in pathology unnecessary.

Applications, with full particulars, and copies of recent testimonials to Secretary.

RAMSGATE. GENERAL HOSPITAL. (101 Beds.) SENIOR HOUSE OFFICER (surgical). Recognised for F.R.C.S. and D.A. Salary £670 p.a., less charge for residential emoluments.

Applications, with copies of testimonials, to Hospital Secretary.

REDRUTH. CAMBORNE-REDRUTH HOSPITAL. (151 Beds—4 Residents.) WEST CORNWALL HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER (surgical) required for the above Hospital. Post now vacant. This is a general hospital with a great variety of cases. The post gives good experience in diagnosis, operative and postoperative treatment, and in actual operative procedure to the candidate.

Applications, stating age, experience and nationality, together with references, to Hospital Secretary, Camborne-Redruth Hospital, Redruth, Cornwall.

REDHILL COUNTY HOSPITAL. (576 Beds.) Redhill GROUP HOSPITAL MANAGEMENT COMMITTEE. RESIDENT HOUSE SURGEON. Post recognised for Pre-registration Service and F.R.C.S.

Apply to Group Secretary, Redhill County Hospital, Earlswood Common, Redhill, Surrey.

REDHILL. EAST SURREY HOSPITAL, Shrewsbury-road, REDHILL, SURREY. (139 Beds.) REDHILL GROUP HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER (male). Duties mainly surgical, with some medicine.

Apply, stating names of 2 referees or testimonials, to Hospital Secretary.

ROMFORD, ESSEX. RUSH GREEN HOSPITAL. (247 Beds.) Applications are invited from registered medical practitioners for the post of RESIDENT SENIOR HOUSE SURGEON, vacant from 25th September, 1953. Recognised for F.R.C.S.

Applications, stating age, nationality, qualifications with dates, and experience, together with copies of 2 recent testimonials or names of 2 referees, should be sent immediately to the Medical Superintendent. (Tel. : Romford 7711.)

ROMFORD, ESSEX. OLDCHURCH HOSPITAL. (722 Beds.) Applications are invited from registered medical practitioners for the post of SENIOR HOUSE OFFICER in Pathology in this large General Hospital containing well-equipped laboratory where excellent opportunities exist for gaining extensive experience.

Applications, stating age, nationality, qualifications with dates, and experience, together with copies of 2 recent testimonials or names of referees, should be sent immediately to the Group Secretary, Romford Group Hospital Management Committee, Oldchurch Hospital, Romford.

ROMFORD, ESSEX. OLDCHURCH HOSPITAL. Applications are invited from registered medical practitioners for the post, now vacant, of SENIOR HOUSE OFFICER (resident) for duties in the Casualty and Admissions Department at the above Hospital. This is a large general hospital, with specialised departments dealing with all types of acute medical and surgical cases. The post affords good opportunity for gaining tuition and experience.

Applications should be addressed immediately to the Secretary of the Romford Group Hospital Management Committee, Oldchurch Hospital, Romford, stating age, nationality, qualifications, experience, and 2 testimonials of recent date or names of 2 referees.

ROMFORD, ESSEX. OLDCHURCH HOSPITAL. (722 Beds.) Applications are invited from registered medical practitioners for the post of SENIOR HOUSE OFFICER in the Department of Ophthalmology.

Applications, stating age, qualifications, present appointment and experience with dates, together with copies of 2 testimonials of recent date or names of 2 referees, should be sent immediately to the Group Secretary, Romford Group Hospital Management Committee, Oldchurch Hospital, Romford.

ROMFORD, ESSEX. VICTORIA HOSPITAL. (91 Beds.) Applications are invited from registered medical practitioners (Male) for the post of RESIDENT HOUSE PHYSICIAN. The duties will include experience in gynæcology. 6 months appointment.

Applications, stating age, nationality, qualifications with dates, and experience, together with copies of 2 recent testimonials or names of 2 referees, should be sent immediately to the Secretary, Romford, Group Hospital Management Committee, Oldchurch Hospital, Romford.

RHYMNEY AND SIRHOWY VALLEYS HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER (Surgical Department) and 2 HOUSE SURGEONS (pre-registration posts) required at Caerphilly District Hospital, 6 miles from Cardiff, 144 Beds for acute general surgery, orthopædics, E.N.T., ophthalmology, gynæcology; 26 Beds for general medicine; busy Outpatient, Casualty and Pathology Departments staffed by full-time and visiting Consultants. Married quarters available. Senior House Officer post tenable 12 months; salary £670, less agreed deduction for full residential emoluments. House Officer posts tenable 6 months; salary £400, less agreed deductions for married quarters and emoluments at £100 p.a. for single residential emoluments.

Apply with full particulars to the Group Secretary, Hospital Management Committee, St. Martin's-road, Caerphilly, near Cardiff.

ROCHFORD, ESSEX. GENERAL HOSPITAL. Applications are invited from medical practitioners of either sex for the appointment of RESIDENT HOUSE OFFICER to the Obstetric and Gynæcological Unit. The Hospital has 70 maternity beds, a gynæcological ward of 25 Beds, and a Premature Baby Unit of 8 Cots. Post vacant 1st October, 1953, and is recognised for the D.Obst.R.C.O.G. and is a pre-registration house appointment.

Applications, &c., to be sent to the undersigned as soon as possible. J. C. FIELD, Secretary.

ROTHERHAM (near). WATHWOOD HOSPITAL. (104 Beds.) SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time RESIDENT REGISTRAR in Thoracic Surgery (tuberculosis only) required for a new Unit which is being opened at the above Sanatorium. Appointment for 1 year in first instance.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 21st September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

RYDE. ROYAL I.W. COUNTY HOSPITAL. South West METROPOLITAN REGIONAL HOSPITAL BOARD. ISLE OF WIGHT GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from registered medical practitioners for the appointment of REGISTRAR, for service as non-resident Casualty Officer. Accommodation available for married or single candidates near the Hospital. Salary £775 or £890 p.a., according to previous posts held.

Forms of application, which may be obtained from the Group Secretary, Hospital Management Committee Headquarters, Clatterford House, Carisbrooke, I.W., should be returned, duly completed, as soon as possible.

STOCKPORT AND BUXTON HOSPITAL MANAGE- MENT COMMITTEE. Applications are invited for the post of SENIOR HOUSE OFFICER (orthopædics) to the above Group. The post is non-resident and becomes vacant 1st October, 1953.

Applications, stating age, qualifications, and experience, together with copies of 2 testimonials, to be addressed to the undersigned immediately. H. G. PRICE, Secretary.

59B, Shaw-heath, Stockport, Cheshire.

STAFFORD. STAFFORDSHIRE GENERAL INFIR- MARY. (175 Beds—Recovery Unit 32 Beds.) STAFFORD HOSPITAL MANAGEMENT COMMITTEE. HOUSE SURGEON (Male or Female). Post vacant 6th September. Post recognised for Pre-registration Service and for F.R.C.S. Eng.

Applications, giving full particulars, together with copies of 3 recent testimonials, to be forwarded to the Group Secretary, 13, Foregate-street, Stafford.

STAFFORD HOSPITAL MANAGEMENT COMMITTEE. SENIOR HOUSE OFFICER (anæsthetics), Male or Female. Recognised for D.A. Post now vacant. Duties mainly at the General Infirmary, Stafford, which is the main and acute general hospital of the Group.

Applications, with copies of 3 testimonials, to the Group Secretary, Stafford Hospital Management Committee, 13, Foregate-street, Stafford.

SALISBURY GENERAL HOSPITAL. Salisbury Group HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of RESIDENT HOUSE SURGEON for a period of 6 months, from 28th October, 1953. The post is open to pre-registration candidates.

Apply, naming 2 referees, to Group Secretary, Odstock Hospital, Salisbury.

SALISBURY GENERAL HOSPITAL. Salisbury Group HOSPITAL MANAGEMENT COMMITTEE. HOUSE SURGEON to Orthopædic and Plastic Unit. The post offers considerable experience in both departments though these will be primarily in the Orthopædic Unit. The appointment is for 6 months starting as soon as possible.

Apply immediately, naming 2 referees, to Group Secretary, Odstock Hospital, Salisbury.

SCOTLAND. WESTERN REGIONAL HOSPITAL BOARD. Applications are invited from suitably qualified medical practitioners for the post of SENIOR HOUSE OFFICER in Obstetrics and Gynæcology at Western District Hospital, Glasgow. The appointment will be for 1 year in the first instance.

Applications, stating age, qualifications, experience, and present appointment, and giving the names of 3 referees, should be submitted not later than 30th September to the Secretary, Board of Management for Glasgow Northern Hospitals, 13, Woodside-place, Glasgow, C.3.

SCOTLAND. WESTERN REGIONAL HOSPITAL BOARD. STOBHILL GENERAL HOSPITAL. Applications are invited from suitably qualified medical practitioners for the newly created post of SENIOR HOUSE OFFICER (resident) in the Acute Geriatric Unit to be opened in the near future. The wards (70 Beds) will be supervised by a Consultant Physician specialising in geriatrics and will be used for the reception, treatment, and classification of elderly medical cases. The appointment, which will be for 1 year in the first instance, offers excellent clinical experience in the diagnosing and treatment of acute and other illnesses in the elderly.

Applications, stating age, qualifications and experience, with the names of 2 referees, to be sent to the Secretary, Board of Management for Glasgow Northern Hospitals, 13, Woodside-place, Glasgow, C.3, within 21 days of the appearance of this advertisement.

SCOTLAND. WESTERN REGIONAL HOSPITAL BOARD. Applications are invited for the following appointments, which will be for 1 year in the first instance:—

REGISTRAR in Psychiatry based at Bellsdyke Mental Hospital.

REGISTRAR in Surgery and Orthopædics for duties at the hospitals under the Board of Management for Stirling and Clackmannan Hospitals.

REGISTRAR in Surgery based at the County Hospital, Stonehouse.

SENIOR REGISTRAR in Surgery based at Ballochmyle Hospital, Mauchline.

REGISTRAR in Radiodiagnosis for Regional duties based at the Western Infirmary.

SENIOR REGISTRAR in Radiodiagnosis based at the Western Infirmary.

These appointments are subject to the National Health Service (Scotland) superannuation regulations.

Applications (12 copies), stating date of birth, qualifications, experience, present appointment, and the names of 3 referees, to reach the Secretary, Western Regional Hospital Board, 64, West Regent-street, Glasgow, by 22nd September, 1953.

SCOTLAND. WESTERN REGIONAL HOSPITAL BOARD. Applications are invited for the appointment of SENIOR REGISTRAR in Medicine at the Victoria Infirmary, Glasgow. This is a transitional post tenable for 1 year with a possible extension to 2 years, and is offered to candidates who have completed 3 or more years of training as Senior Registrars. This appointment is subject to the National Health Service (Scotland) superannuation regulations.

Applications (12 copies), stating date of birth, qualifications, experience, present appointment, and the names of 3 referees, to reach the Secretary, Western Regional Hospital Board, 64, West Regent-street, Glasgow, by 22nd September, 1953.

SCOTLAND. SOUTH-EASTERN REGIONAL HOS- PITAL BOARD. Applications are invited for the post of SENIOR REGISTRAR in Surgery in the Royal Infirmary of Edinburgh. The post is superannuable and the conditions of service are in accordance with the regulations.

Applications, giving particulars of age, previous experience, and qualifications, together with the names of 3 referees, should be submitted to the Secretary, South-Eastern Regional Hospital Board, Scotland, 11, Drumsheugh-gardens, Edinburgh, 3, within 30 days.

SCOTLAND. SOUTH-EASTERN REGIONAL HOS- PITAL BOARD. Applications are invited for the following appointments in the Ophthalmic Department of the Royal Infirmary, Edinburgh:—

2 posts as SENIOR REGISTRAR.

1 post as REGISTRAR.

The posts are superannuable and the conditions of service are in accordance with the regulations.

Applications, giving particulars of age, qualifications, and previous experience, together with the names of 2 referees, should be submitted to the Secretary, South-Eastern Regional Hospital Board, Scotland, 11, Drumsheugh-gardens, Edinburgh, 3, within 30 days.

SCOTLAND. SOUTH-EASTERN REGIONAL HOSPITAL BOARD. Applications are invited for the post of REGISTRAR in Orthopædic Surgery in the Royal Infirmary of Edinburgh, for a period of 1 year. The post is superannuable and the conditions of service are in accordance with the regulations.

Applications, giving particulars of age, qualifications, and previous experience, together with the names of 2 referees, should be submitted to the Secretary, South-Eastern Regional Hospital Board, Scotland, 11, Drumsheugh-gardens, Edinburgh, 3, by 28th September.

SHEFFIELD. THE UNITED SHEFFIELD HOSPITALS. Applications are invited for the following posts :—

(*a*) NON-RESIDENT SENIOR SURGICAL REGISTRAR. The appointment is for 1 year in the first instance and will be reviewed annually. It has been agreed in principle between the Board of Governors of the United Sheffield Hospitals and the Sheffield Regional Hospital Board that the appointment, if extended to the full period of 4 years, will be divided, if circumstances permit, between the Hospitals of the Board of Governors and a Hospital in the Region.

Applications, stating age, qualifications and experience, with the names of 3 referees, should be sent to the Chief Administrative Officer, The United Sheffield Hospitals, West-street, Sheffield, 1, to arrive not later than 19th September, 1953.

(*b*) RESIDENT SENIOR HOUSE OFFICER or HOUSE SURGEON to the E.N.T. Department, Royal Hospital. Post vacant.

(*c*) RESIDENT SENIOR HOUSE OFFICER in Anæsthetics, at the Royal Infirmary. Post vacant.

Applications for posts (*b*) and (*c*) should state age, qualifications and experience, and enclose copy testimonials, and be addressed to the Superintendents of the respective hospitals.

SHEFFIELD, 6. KING EDWARD VII ORTHOPÆDIC HOSPITAL, Rivelin Valley-road. (140 Beds.) SHEFFIELD REGIONAL HOSPITAL BOARD. SHEFFIELD NO. 3 HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from Male or Female practitioners for the appointment of HOUSE SURGEON or SENIOR HOUSE OFFICER (according to experience), resident or non-resident. The Hospital has at present a complement of 140 Beds, of which 100 are occupied by children. The post would involve a fair amount of medical work as well as orthopædic. Salary £670 p.a., less authorised deductions in respect of residential emoluments.

Applications, stating age, qualifications and experience, with names of 2 referees, should be addressed to the Group Secretary, Sheffield No. 3 Hospital Management Committee, Lodge Moor Hospital, Sheffield, 10.

SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time NON-RESIDENT SENIOR REGISTRAR in Dermatology (transitional appointment) required for 1 year in the first instance but not beyond 31st December, 1955, for Nottingham City Hospital and Nottingham Skin Clinic. Terms as recently agreed by the Ministry of Health and the profession. Applications invited from Senior Registrars in dermatology in fourth or subsequent years and from those who held such posts for 3 or more years but vacated them after 1st January, 1951.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, 10, by 26th September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

SHEFFIELD REGIONAL HOSPITAL BOARD. Resident LOCUM REGISTRAR (anæsthetics) required at County Hospital, Lincoln, for a period of 6 weeks from 1st October, 1953. Remuneration £16 per week, with a deduction for residence.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, naming 2 referees.

SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time Locum SURGICAL REGISTRAR required at Grimsby General Hospital, for the period 7th September–26th October, 1953. Remuneration £16 per week, with a deduction if resident.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, naming 3 referees.

SHEFFIELD. CITY GENERAL HOSPITAL. (Recognised for Final Fellowship examination.) SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time RESIDENT REGISTRAR (thoracic surgery/general surgery) required. Large general hospital with Regional Department of Cardiology. Thoracic Surgical Unit deals with tuberculosis and non-tuberculosis cases. Previous surgical experience desirable. Appointment for 1 year in first instance in thoracic surgery and, if extended, second year will be spent in general surgery.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 14th September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

SCUNTHORPE AND DISTRICT WAR MEMORIAL HOSPITAL. SHEFFIELD REGIONAL HOSPITAL BOARD. Whole-time RESIDENT CASUALTY REGISTRAR required. Appointment for 1 year in first instance.

Apply to Secretary, Sheffield Regional Hospital Board, Old Fulwood-road, Sheffield, by 14th September, 1953, giving age, nationality, qualifications, present and previous appointments with dates, naming 3 referees.

SHREWSBURY. ROYAL SALOP INFIRMARY. (241 Beds.) SHREWSBURY GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from general registered practitioners (Male or Female) for the appointment of RESIDENT HOUSE SURGEON in General Surgery. Vacant immediately, and tenable in the first instance for 6 months. Recognised for the F.R.C.S., and approved for pre-registration service. Salary and conditions of service in accordance with national scale.

Applications with references, should be sent to—

J. P. MALLETT, Group Secretary,
Group 15 Hospital Management Committee.
Royal Salop Infirmary, Shrewsbury, 27th July, 1953.

SHREWSBURY. ROYAL SALOP INFIRMARY AND COPTHORNE HOSPITAL. (500 Beds.) SHREWSBURY GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of RESIDENT ANÆSTHETIST (Senior House Officer grade). Post recognised under the conditions of the F.F.A.R.C.S. examination, and vacant 1st October, 1953.

Applications, stating age, nationality, qualifications, and previous experience, together with copies of recent testimonials, should be sent to the Group Secretary, Hospital Management Committee, Royal Salop Infirmary, Shrewsbury.

J. P. MALLETT, Group Secretary.
Royal Salop Infirmary, Shrewsbury, 10th August, 1953.

SHREWSBURY. ROYAL SALOP INFIRMARY/COPTHORNE HOSPITAL. (500 Beds.) SHREWSBURY GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of CLINICAL PATHOLOGIST (Senior House Officer grade), resident or non-resident. The appointment is at the Group Laboratory, and is tenable for 1 year. Vacant immediately. (A unit of the Public Health Laboratory Service is housed in the same building.)

Applications, stating age, qualifications, nationality, and experience, accompanied by copy testimonials, should be sent to the Group Secretary, Hospital Management Committee, Royal Salop Infirmary, Shrewsbury.

J. P. MALLETT, Group Secretary.
Royal Salop Infirmary, Shrewsbury, 10th August, 1953.

SHREWSBURY. ROYAL SALOP INFIRMARY. (241 Beds.) SHREWSBURY GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from registered medical practitioners for the appointment of ORTHOPÆDIC/ACCIDENT HOUSE SURGEON (Senior House Officer). The successful applicant will be allowed to attend for 2 days a month at The Robert Jones and Agnes Hunt Orthopædic Hospital, Oswestry, for postgraduate study with the Consultant. The post is recognised under the revised Fellowship regulations in respect of the 6 months training required of candidates for the Final Fellowship examination.

Applications, stating age, qualifications, nationality and experience, accompanied by copy testimonials, should be sent to—

J. P. MALLETT, Group Secretary,
Group 15 Hospital Management Committee.
Royal Salop Infirmary, Shrewsbury, 10th July, 1953.

SHREWSBURY. ROYAL SALOP INFIRMARY. SHREWSBURY GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from registered medical practitioners (Male or Female) for the post of SENIOR HOUSE OFFICER or HOUSE OFFICER (pædiatric), to take charge of the Royal Salop Infirmary Children's Unit (70 Beds), under the Consultant Pædiatrician. Vacant 12th October, 1953. The Unit consists of medical, surgical, and fever beds.

Applications, stating age, qualifications, nationality and experience, accompanied by copy testimonials, should be sent to the Group Secretary, Shrewsbury Hospital Management Committee, Royal Salop Infirmary, Shrewsbury.

22nd August, 1953. J. P. MALLETT, Group Secretary.

SHREWSBURY. EYE, EAR AND THROAT HOSPITAL. SHREWSBURY GROUP HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of SENIOR HOUSE OFFICER (E.N.T.) vacant immediately. Duties at E.N.T. Hospital (68 Beds) and Copthorne Hospital (168 Beds.) Post recognised for the D.L.O. R.C.S.

Applications, stating age, qualifications, nationality, and experience, together with copies of recent testimonials, should be sent to J. P. MALLETT, Group Secretary.

Royal Salop Infirmary, Shrewsbury, 29th August, 1953.

ST. HELENS. ECCLESTON HALL HOSPITAL. (75 Beds.) Applications are invited from suitably qualified registered medical practitioners for the post of SENIOR HOUSE OFFICER at the above Hospital. Salary in accordance with the terms and conditions of service for medical staff. The person appointed will work under the supervision of the Consultant Chest Physician for the Group. There are 75 Beds and the work comprises all types of tuberculosis. Good residential accommodation for a single person, male or female, is available.

Applications to be forwarded to the undersigned immediately.

N. RICHARDS, Secretary,
St. Helens and District Hospital Management Committee.
Group Office, County Hospital, Whiston, near Prescot.

ST. ALBANS. CITY HOSPITAL, St. Albans, Herts. Locum JUNIOR HOSPITAL MEDICAL OFFICER required for the Gynæcological and Obstetric Department at the above Hospital from 14th to 27th September, 1953, inclusive.

Applications, stating age, qualifications and experience, to the Group Secretary, St. Albans City Hospital, Normandy-road, St. Albans.

ST. ALBANS CITY HOSPITAL, St. Albans, Herts. (372 Beds.) Locum REGISTRAR required for general surgical and orthopædic duties at the above Hospital from 14th September to 10th October inclusive.

Applications, stating age, qualifications, and experience, together with the names of 2 referees, to the Group Secretary, St. Albans City Hospital, Normandy-road, St. Albans, as soon as possible.

STONEHOUSE, GLOS. STANDISH HOUSE SANATORIUM. (278 Beds tuberculosis.) JUNIOR HOUSE OFFICER, post now vacant.

Applications, stating age, nationality, and previous hospital appointments, if any, together with the names of 2 referees, to be sent to the Secretary.

SWINDON. VICTORIA HOSPITAL. Applications invited for post of RESIDENT SENIOR HOUSE OFFICER (anæsthetics), vacant on 27th September, 1953, for the Swindon hospitals. Post is recognised for the D.A. Approved salary, conditions, &c.

Apply Secretary, Swindon and District Hospital Management Committee, 7, Okus-road, Swindon.

STOKE-ON-TRENT. CITY GENERAL HOSPITAL. STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of SENIOR HOUSE OFFICER (general surgery). Recognised for F.R.C.S.

Applications, stating age, nationality, and full details of previous experience, to the Group Secretary, Hospital Management Committee, Princes-road, Stoke-on-Trent.

STOKE-ON-TRENT. CITY GENERAL HOSPITAL. STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of HOUSE OFFICER (pædiatrics). Post recognised for experience during pre-registration periods.

Apply, with copy testimonials, stating age, nationality, and full details of previous service, to the Group Secretary, Hospital Management Committee, Princes-road, Stoke-on-Trent.

STOKE-ON-TRENT. CITY GENERAL HOSPITAL. STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of SENIOR HOUSE OFFICER in Pædiatrics. Post recognised for D.C.H.

Applications, with copy testimonials, and details of previous experience, should be forwarded to the Group Secretary, Hospital Management Committee, Princes-road, Stoke-on-Trent, as soon as possible.

STOKE-ON-TRENT. CITY GENERAL HOSPITAL. STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointments of HOUSE SURGEONS (Male or Female), pre-registration posts. 3 posts becoming vacant during the month of September and tenable for 6 months. Posts approved for F.R.C.S. examination.

Applications, stating age, nationality and qualifications with dates, together with copy testimonials, to the Group Secretary, Stoke-on-Trent Hospital Management Committee, Princes-road, Stoke-on-Trent, as soon as possible.

STOKE-ON-TRENT. NORTH STAFFORDSHIRE ROYAL INFIRMARY. STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of HOUSE OFFICER (medical) pre-registration post, vacant 1st September, 1953.

Applications, giving full details, together with copy testimonials, to the Group Secretary, Hospital Management Committee, Princes-road, Stoke-on-Trent.

STOKE-ON-TRENT. NORTH STAFFORDSHIRE ROYAL INFIRMARY. STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE. HOUSE OFFICER (orthopædics) required, vacant now. Post recognised for F.R.C.S.

Applications, stating age and nationality, together with details of previous service, to the Group Secretary, Stoke-on-Trent Hospital Management Committee, Princes-road, Stoke-on-Trent.

SOUTH SOMERSET CLINICAL AREA. The Board of GOVERNORS OF THE UNITED BRISTOL HOSPITALS AND THE SOUTH-WESTERN REGIONAL HOSPITAL BOARD. Applications are invited by the above Boards from registered medical practitioners for the joint appointment of SENIOR REGISTRAR in Psychiatry. Applicants should have had wide experience in psychiatry. The appointment will be held for 1 year in the first instance, but may be renewed thereafter on an annual basis. The successful candidate will be required to work for the first year mainly at Tone Vale Hospital, near Taunton, which provides treatment in all types of psychiatric cases, including psychotic children, and all forms of modern treatment; also attendance at outpatient psychiatric clinics and work in the Electro-encephalographic Department. He will also be required to visit other hospitals in the Clinical Area as may be determined by the Regional Board from time to time. A flat suitable for a married man or single quarters will be available in the Hospital.

Applications (12 copies), stating date of birth, qualifications and experience, together with 12 copies of 2 testimonials, and the names and addresses of 2 referees, should be sent to the Secretary of the Regional Hospital Board, 27, Tyndalls Park-road, Bristol, 8, not later than 19th September, 1953.

SOUTHAMPTON. ROYAL SOUTH HANTS HOSPITAL. (278 Beds.) ORTHOPÆDIC HOUSE SURGEON required. Post tenable 6 months. This Hospital is the centre to which all trauma from a large industrial town and port is directed, thus providing excellent experience in the treatment of traumatic conditions; patients with orthopædic conditions are also drawn from a wide area.

Applications, with copies of testimonials, should be sent as soon as possible to the Group Secretary, Southampton Group Hospital Management Committee, Bullar-street, Southampton.

SOUTHAMPTON GROUP HOSPITAL MANAGEMENT COMMITTEE. SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD. Applications are invited for the posts of Whole-time REGISTRAR in Anæsthetics at each of the following hospitals:—

Royal South Hants Hospital, Southampton (278 Beds).
Southampton General Hospital (471 Beds).

Candidates may visit the hospitals if they so desire.

Forms of application for either or both posts will be forwarded by the undersigned on receipt of a stamped addressed envelope, and should be returned by not later than 19th September, 1953.

FRANK JENNINGS, Group Secretary.

Bullar-street, Southampton.

SOUTH EAST METROPOLITAN REGIONAL HOSPITAL BOARD. Applications are invited for a whole-time appointment as RESIDENT SURGICAL OFFICER to fill a vacancy in the approved establishment at the Canterbury Group of hospitals. The salary will be £890 p.a. and the appointment will be in accordance with the terms and conditions of service of hospital medical and dental staffs (England and Wales) and will be for 1 year in the first instance, renewable for a further year.

Applications, giving particulars of age, qualifications and experience, with relevant dates, together with the names and addresses of 2 referees, to be sent to the Secretary, Registrars Committee, South East Metropolitan Regional Hospital Board, 11, Portland-place, W.1, not later than 19th September, 1953.

SOUTH EAST METROPOLITAN REGIONAL HOSPITAL BOARD. Applications are invited for an appointment as Whole-time REGISTRAR in Ophthalmology to fill a vacancy in the approved Trainee establishment at the Hastings Group of hospitals. The appointment will be in accordance with the terms and conditions of service of hospital medical and dental staffs (England and Wales) and will be for 1 year in the first instance.

Applications, giving particulars of age, qualifications and experience, with relevant dates, together with the names and addresses of 2 referees, to be sent to the Secretary, Registrars Committee, South East Metropolitan Regional Hospital Board, 11, Portland-place, W.1, not later than 19th September, 1953.

SHOTLEY BRIDGE GENERAL HOSPITAL, Shotley BRIDGE, CONSETT, CO. DURHAM. RESIDENT HOUSE OFFICERS (obstetrics and gynæcology) required for 6 months commencing as soon as possible for duties in Obstetrical (30 Beds) and Gynæcological (43 Beds) Departments. Recognised for D.Obst.R.C.O.G. (alternatively second pre-registration appointment).

Apply to the Secretary, North West Durham Hospital Management Committee, stating age and experience and enclosing copies of 3 recent testimonials.

SKIPTON (near). MIDDLETON AND GRASSINGTON GROUP. THE HOSPITAL, GRASSINGTON, near SKIPTON. (208 Beds.) Applications are invited for appointment as HOUSE OFFICER at the above Hospital for tuberculosis. Salary in accordance with national scale (based on experience) £350–£670. Accommodation available.

Applications, stating age, qualifications and experience, together with names of 2 referees, to be addressed to the Secretary.

SLOUGH. UPTON HOSPITAL. House Officer required for Junior Casualty post. Post offers experience in orthopædic and plastic surgery.

Applications, with 2 testimonials, to the Hospital Secretary.

SOUTHPORT PROMENADE HOSPITAL. House PHYSICIAN (resident). Appointment vacant mid-September. Post not recognised for pre-registration purposes. National Health Service terms and conditions of service.

Apply, stating age, nationality and qualifications, together with copies of 2 recent testimonials, to—

T. CROOK, Group Secretary,
Southport and District Hospital Management Committee.
Promenade Hospital, Southport.

SOUTHPORT PROMENADE HOSPITAL. Senior HOUSE OFFICER (Surgeon), resident, mainly orthopædic and E.N.T. duties. Post vacant mid-September. Salary £670 p.a., less £130 p.a. for emoluments.

Apply, stating age, nationality, qualifications and experience, together with copies of 2 testimonials, to—

T. CROOK, Group Secretary,
Southport and District Hospital Management Committee.
Promenade Hospital, Southport.

TAUNTON AND SOMERSET HOSPITAL. Applications are invited from registered practitioners for the post of HOUSE SURGEON (casualty and orthopædic). The post is recognised by the Royal College of Surgeons as a qualifying appointment for the Final Fellowship examination.

Applications, stating age, qualifications with dates, nationality, details of experience, together with 2 recent testimonials, to be sent immediately to the Secretary, Taunton Hospital Management Committee, Musgrove Park Hospital, Taunton, Somerset.

TAUNTON AND SOMERSET HOSPITAL. Taunton HOSPITAL MANAGEMENT COMMITTEE. Applications are invited from registered medical practitioners for the post of SENIOR HOUSE OFFICER (gynæcology, 28 Beds; and obstetrics, 50 Beds). The appointment is for 6 months, renewable for a further 6 months, and preference will be given to candidates who have completed a 6 months appointment in obstetrics.

Applications, stating age, qualifications with dates, nationality, and details of experience, together with 2 recent testimonials, should be sent immediately to the Secretary, Musgrove Park Hospital, Taunton.

TALGARTH, BRECON. SOUTH WALES SANATORIUM. Applications are invited for the post of RESIDENT ASSISTANT MEDICAL OFFICER (Junior Hospital Medical Officer status). This Sanatorium consists of 284 Beds for male adult pulmonary cases. Accommodation will shortly become available for a married man.

Applications, with copies of 3 recent testimonials, to Physician-Superintendent.

TAPLOW, near MAIDENHEAD. CANADIAN RED CROSS MEMORIAL HOSPITAL. HOUSE SURGEON to the Unit of Obstetrics and Gynæcology required for post vacant 21st October. Post recognised for M.R.C.O.G. Preference will be given to candidates who have had previous experience in midwifery and gynæcology, and who are seeking a pre-registration House Officer post under the Medical Act, 1950. Salary on national scale.

Applications, stating age, experience and qualifications, with dates, together with copies of 2 testimonials, should be forwarded to the Hospital Secretary by 11th September, 1953.

TORQUAY. TORBAY HOSPITAL. Resident Casualty OFFICER (Senior House Officer status) required for 1st November, 1953.

Applications, stating qualifications, nationality, age, with copies of testimonials (quoting ref.: F955/31), to be sent to the Group Secretary, Torquay District Hospital Management Committee, 62/64, East-street, Newton Abbot, S. Devon.

TRURO. ROYAL CORNWALL INFIRMARY. (212 Beds. 9 Residents.) WEST CORNWALL HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the combined pre-registration post of HOUSE SURGEON (E.N.T. and Ophthalmic Departments) and JUNIOR HOUSE PHYSICIAN, vacant 4th November, 1953.

Applications, stating age, qualifications and experience, with copies of 2 recent testimonials, to the Hospital Secretary.

TRURO. ROYAL CORNWALL INFIRMARY. (General Hospital—212 Beds. 9 Residents.) WEST CORNWALL HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of RESIDENT ANÆSTHETIST (Senior House Officer status), which falls vacant on 6th November, 1953. Post tenable for 1 year.

Applications, stating age, nationality, qualifications and experience, and enclosing copies of 2 recent testimonials, should be forwarded to the Hospital Secretary, Royal Cornwall Infirmary, Truro.

TRURO. ROYAL CORNWALL INFIRMARY. (General Hospital—212 Beds. 9 Residents.) WEST CORNWALL HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the 2 posts of SENIOR RESIDENT HOUSE OFFICER to the Orthopædic and Traumatic Department. This is a large and busy centralised unit with 2 Consultants, 64 Beds, and Out-patient Departments also 45-Bed Rehabilitation Annexe which deal with the whole of the West Cornwall Area. The posts are now vacant, and are tenable for 1 year.

Applications, stating age, nationality, qualifications and experience, and accompanied by copies of 2 recent testimonials, should be forwarded to the Hospital Secretary, Royal Cornwall Infirmary, Truro, without delay.

TRURO. ROYAL CORNWALL INFIRMARY. (212 Beds. 9 Residents.) WEST CORNWALL HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the newly created office of SENIOR HOUSE OFFICER (Pathological Department).

Applications, stating age, qualifications, and experience, and enclosing copies of 2 recent testimonials, should be sent to the Hospital Secretary, Royal Cornwall Infirmary, Truro.

TUNSTALL. BURSLEM, HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL. (96 Beds.) STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of HOUSE OFFICER (medical).

Apply, with copy testimonials, and details of previous appointments held, to the Group Secretary, Stoke-on-Trent Hospital Management Committee, Princes-road, Stoke-on-Trent, as soon as possible.

TUNSTALL. BURSLEM, HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL. (96 Beds.) STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of HOUSE OFFICER (general surgery).

Apply, with copy testimonials, stating age, nationality, and full details of previous service, to the Group Secretary, Hospital Management Committee, Princes-road, Stoke-on-Trent.

WAKEFIELD. PINDERFIELDS GENERAL HOSPITAL. Applications invited for following appointments in the Leeds Regional Thoracic Centre at Pinderfields General Hospital :—

SENIOR HOUSE PHYSICIAN.
SENIOR HOUSE SURGEON.

Salary £670 p.a., from which a deduction at the rate of £130 p.a. will be made for board, lodging, &c.

Address written applications to undersigned, giving full details of experience and 2 names and addresses for reference.

G. L. BANNER, Group Secretary.
Victoria Chambers, Wood-street, Wakefield.

WATFORD, HERTS. THE WATFORD AND DISTRICT PEACE MEMORIAL HOSPITAL. (198 Beds.) Applications are invited from registered medical practitioners for the post of HOUSE SURGEON, recognised for pre-registration. Post vacant mid-September. Salary according to National Health Service scale.

Applications, stating age, qualifications and experience, together with copies of 2 recent testimonials, should be sent to—

CYRIL HOPKINSON, Administrator.

WARRINGTON GENERAL HOSPITAL. (368 Beds.) Applications are invited for the post of HOUSE SURGEON (Male or Female) at the above Hospital. National Health Service terms and conditions. The staffing of the Surgical Unit consists of a Senior Registrar, Senior House Officer, and 2 House Surgeons. The post offers a comprehensive training in surgery.

Apply, giving full particulars, to—

H. L. BOOT, Group Secretary,
Warrington and District Hospital Management Committee.
c/o General Hospital, Warrington, Lancs.

WARRINGTON INFIRMARY. (172 Beds.) Applications are invited for a vacancy at the above Hospital for a RESIDENT HOUSE SURGEON (Male or Female). Salary will be £350–£450 p.a., less a deduction of £100 for full residential emoluments.

Applications should be sent to—

H. L. BOOT, Group Secretary,
Warrington and District Hospital Management Committee.
c/o General Hospital, Warrington, Lancs.

WARRINGTON INFIRMARY. (172 Beds.) Applications are invited for the post of JUNIOR HOSPITAL MEDICAL OFFICER (Resident Casualty Officer). The commencing salary is in accordance with the scale £700–£50–£1000, less a deduction of £130 for residential emoluments.

Applications, stating age, experience, and qualifications, should be sent to—

H. L. BOOT, Group Secretary,
Warrington and District Hospital Management Committee.
c/o General Hospital, Warrington, Lancs.

WARWICKSHIRE. SOUTH WARWICKSHIRE HOSPITAL GROUP (NO. 14). Applications are invited for the appointment of ANÆSTHETIC SENIOR HOUSE OFFICER, vacant now. Duties at hospitals in the Group but mainly at the Warneford Hospital, Leamington Spa.

Applications, giving names and addresses of 3 referees, to be sent to the undersigned as soon as possible.

W. A. JAMES, Group Secretary.
87, Radford-road, Leamington Spa.

WINCHESTER. ROYAL HAMPSHIRE COUNTY HOSPITAL. (311 Beds.) HOUSE PHYSICIAN required, vacant 6th October. May be pre-registration post.

Applications, with copies of 2 testimonials, to the Secretary.

WINCHESTER. ROYAL HAMPSHIRE COUNTY HOSPITAL. (311 Beds.) HOUSE OFFICER (gynæcology) required, vacant mid-September. The hospital is recognised by the Royal College.

Applications, with copies of 2 testimonials, to the Secretary.

WINCHESTER. ROYAL HAMPSHIRE COUNTY HOSPITAL. (311 Beds.) SENIOR HOUSE OFFICER (orthopædics) required immediately. Resident. Post recognised for F.R.C.S. Wide experience available under Area orthopædic team. Appointment for 6 months in the first instance.

Applications, with copies of 2 testimonials, to the Secretary.

WEST BROMWICH AND DISTRICT GENERAL HOSPITAL, Edward-street, WEST BROMWICH. (144 Beds.) Applications are invited for the post of HOUSE SURGEON (first, second, or third post). Range of salary £350–£450 p.a. according to experience, with deduction of £100 p.a. in respect of board and lodging. The post is tenable for 6 months and is recognised for pre-registration scheme.

Applications, together with 2 recent testimonials, should be submitted to—

JOHN O. ROBINS, Secretary, West Bromwich and District Hospitals Management Committee, Group No. 18.

WELSH REGIONAL HOSPITAL BOARD. Applications are invited for the appointment of a REGISTRAR in General Surgery to serve the Newport and East Monmouthshire Hospital Management Committee. The successful candidate will be based at St. Woolos Hospital, Newport, and may also be expected to serve other hospitals within the Group. The post is non-resident and will be subject to review at the end of the first year.

Forms of application should be obtained from the Senior Administrative Medical Officer, Welsh Regional Hospital Board, Cathays Park, Cardiff, within 14 days of appearance of this advertisement.

WELSH REGIONAL HOSPITAL BOARD. Applications are invited for the appointment of a REGISTRAR in Ophthalmology to serve the Glantawe Hospital Management Committee. The successful candidate will be based at Llanelly Hospital (24 ophthalmic beds) and will also be expected to serve other hospitals in the Group. The post is non-resident and will be subject to review at the end of the first year.

Forms of application should be obtained from the Senior Administrative Medical Officer, Welsh Regional Hospital Board, Cathays Park, Cardiff, within 14 days of appearance of this advertisement.

WHISTON. COUNTY HOSPITAL. (882 Beds.) Applications are invited for the post of RESIDENT HOUSE SURGEON which is recognised under the Medical Act as a pre-registration appointment. Salary in accordance with the terms and conditions of service for medical staff.

Applications, stating age, qualifications and experience, and giving 2 names for reference, should be forwarded to the undersigned as soon as possible.

N. RICHARDS, Secretary,
St. Helens and District Hospital Management Committee.
Group Office, County Hospital, Whiston, near Prescot.

WHITEHAVEN HOSPITAL, Cumberland. (109 Beds and Annexe of 19 Beds.) HOUSE SURGEON for Orthopædic and Casualty Departments (House Officer or Senior House Officer grade), vacant now.

Detailed applications, with dates and copies of 2 testimonials, to Secretary.

WOKING AND CHERTSEY GROUP HOSPITAL MANAGEMENT COMMITTEE. GROUP PATHOLOGY LABORATORY. Applications are invited for the post of RESIDENT CLINICAL PATHOLOGIST (Senior House Officer). Training will be available in all branches of clinical pathology. Post tenable for 1 year. Salary £670 p.a.

Applications, stating age, qualifications, &c., together with names of 2 referees, to Group Secretary (Dept. L), "Huntington," Guildford-road, Chertsey, Surrey.

WORKINGTON INFIRMARY, Cumberland. (86 Beds, plus Annexe 34 Beds, pre-registration post, recognised F.R.C.S. (Ed.).) HOUSE SURGEON (first, second, or Senior House Officer post), vacant now.

Detailed applications, with dates and copies of 2 testimonials, to Secretary.

WOLVERHAMPTON HOSPITAL MANAGEMENT COMMITTEE GROUP NO. 16 BIRMINGHAM REGION.

The Royal Hospital, Wolverhampton (an Associated Hospital of the University of Birmingham Medical School)
SENIOR HOUSE OFFICER or HOUSE OFFICER (Fracture and Orthopædic Department), vacant now.
HOUSE OFFICER (anæsthetics), vacant now. Appointment recognised for D.A.
HOUSE OFFICER (Casualty Department), vacant now.

Women's Hospital, Wolverhampton
HOUSE OFFICER (gynæcological and obstetric) vacant 5th October. Appointment recognised for M.R.C.O.G.

Wolverhampton and Midland Counties Eye Infirmary
HOUSE OFFICER, vacant 15th September. Appointment recognised for F.R.C.S. and D.O. examinations.

Applications, with copies of 3 recent testimonials, to be sent to W. COCKBURN, Group Secretary.
The Royal Hospital, Wolverhampton.

WREXHAM. MAELOR GENERAL HOSPITAL. (517 Beds.) WREXHAM, POWYS AND MAWDDACH HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the appointment of PÆDIATRIC HOUSE PHYSICIAN to commence duties immediately at the above Hospital. Duties at the Pædiatric Unit (50 Beds and cubicles) will be under the supervision of the Consultant Pædiatrician.

Applicants should apply, enclosing 2 recent testimonials, to—

WILLIAM JONES, Secretary, Wrexham,
Powys and Mawddach Hospital Management Committee.
Maelor General Hospital, Wrexham.

WREXHAM. WAR MEMORIAL HOSPITAL. (170 Beds.) WREXHAM, POWYS AND MAWDDACH HOSPITAL MANAGEMENT COMMITTEE. Applications are invited for the post of HOUSE SURGEON at the above Hospital, to commence immediately. The appointment is recognised for the Diploma of F.R.C.S. (Eng. and Edin.) and is an approved pre-registration House Officer post. Salary will be at the rate of £350, £400 or £450 p.a., according to experience, less £100 p.a. for residential emoluments.

Applications, stating age, nationality, qualifications and experience, together with copies of 2 recent testimonials, should be addressed to—

WILLIAM JONES, Secretary, Wrexham,
Powys and Mawddach Hospital Management Committee.
Maelor General Hospital, Croesnewydd-road, Wrexham.

YORKSHIRE. EAST RIDING HOSPITAL MANAGEMENT COMMITTEE.

Westwood Hospital, Beverley, Yorks (218 Beds)

(*a*) ORTHOPÆDIC HOUSE SURGEON (Senior House Officer). Recognised for F.R.C.S. Vacant now.

East Riding General Hospital, Driffield, Yorks (249 Beds)

(*b*) HOUSE SURGEON (first, second, or third post), vacant now. Pre-registration post. Recognised for F.R.C.S. General surgical duties.

(*c*) HOUSE PHYSICIAN (first, second, or third post), vacant early October. Pre-registration post. Duties include medical and chronic wards, casualty and some anæsthetics and midwifery. Good general experience for first house appointment.

Northfield Sanatorium, Driffield, Yorks (78 Beds)

(*d*) HOUSE PHYSICIAN (first, second, or third post). General Sanatorium treatment. Provision may be made available for thoracic surgery, pathological experience, and M.M.R. Unit. Time for study.

Salary for (*a*) is £670 p.a., less £140 for board and lodging; and for (*b*), (*c*), and (*d*) £350–£450 p.a., less £100 for board and lodging. Fully qualified practitioners may also apply for the pre-registration posts.

Detailed applications to Secretary, Westwood Hospital, Beverley, Yorkshire.

DOUGLAS. NOBLE'S ISLE OF MAN HOSPITAL. (160 Beds.) Applications are invited for the post of HOUSE SURGEON at this busy general hospital. The post is vacant immediately and offers wide experience in congenial surroundings. Salary at the rate of £350, £400, or £450 a year according to experience, subject to a deduction of £100 a year in respect of residential emoluments. 4 residents on the staff. The appointment is tenable for 6 months in the first instance.

Applications, giving full particulars, with copies of 2 recent testimonials, to the Secretary, Noble's Hospital, Douglas, Isle of Man.

NORTHERN IRELAND HOSPITALS AUTHORITY invite applications for a whole-time post as REGISTRAR or SENIOR HOUSE OFFICER in General Medicine to hospitals managed by the North West Hospital Management Committee. The appointment may be as Senior House Officer or Senior or Principal Registrar, the analogous grades in Great Britain being Senior House Officer, Registrar, and Senior Registrar respectively. The terms and conditions of the appointment will be in accordance with the Authority's application of the Spens Report to Northern Ireland.

Applications should be made on a form which may be obtained (together with further details) from the Secretary, Northern Ireland Hospitals Authority, Friends' Provident Building, 58, Howard-street, Belfast, which must be returned to him so as to be received not later than 19th September, 1953.

NORTHERN IRELAND HOSPITALS AUTHORITY invite applications for a post as MEDICAL OFFICER at Mourne Hospital, Kilkeel, co. Down. The post will be on a whole-time basis for which the salary will be on the scale of £700–£50–£1000 p.a. In the first instance, appointment will be for the period ending 30th September, 1954.

Applications should be made on a form which may be obtained (with further particulars) from the Secretary, Northern Ireland Hospitals Authority, Friends' Provident Building, 58, Howard-street, Belfast, and which must be returned to him so as to be received not later than 19th September, 1953.

CANADA. THE CHILDREN'S HOSPITAL, Halifax, CANADA, authorised for 1 year pædiatric training, will receive applications for the post of ASSISTANT RESIDENT. Fare to Canada will be paid for the successful applicant. Applicants must have a M.D. Degree and some experience in pædiatrics.

Apply to the Superintendent, Children's Hospital, Nova Scotia.

NEW YORK. NEW ROCHELLE HOSPITAL, New ROCHELLE, NEW YORK, U.S.A. (360-Bed general community hospital.) Approved by American College of Surgeons; American Medical Association for Internship and Residency Training. Only graduates from approved university schools accepted. INTERNES—$100 per month, plus full maintenance.

Apply Superintendent.

UNITED STATES. ST. JOSEPH'S HOSPITAL, MEMPHIS 7, TENNESSEE. PATHOLOGY RESIDENCY. Large general hospital located in a medical center. Active education program for House Officers in majority of specialties; current vacancy is in pathology; position open to physicians of either sex. Previous experience in pathology not essential. Length of appointment 1 year minimal, residency is approved for 3 years. Salary $200 per month starting plus full maintenance.

Apply Director of Laboratory.

Public Appointments

FACTORY DOCTORS. Factories Acts, 1937 and 1948. The following appointment as Appointed Factory Doctor is vacant. Apply to Chief Inspector of Factories, 8, St. James's-square, London, S.W.1.

District	*County*	*Latest date for receipt of applications*
STEYNING ..	SUSSEX ..	19TH SEPTEMBER, 1953

BIRMINGHAM. CITY OF BIRMINGHAM. Public HEALTH DEPARTMENT. Applications invited for appointment of Whole-time DENTAL OFFICER (Male or Female). Duties will be concerned with dental inspection and treatment of expectant and nursing mothers and young children up to age of 5 years. Salary £800–£50–£1250 p.a. with placement on the scale according to experience. Pension scheme (including widows and orphans); medical examination. The Officer appointed will be required to devote his her whole time to official duties and the appointment will be subject to 1 months notice on either side.

Applications, stating qualifications and experience, with names of 3 referees, to be sent to Medical Officer of Health, Council House, Birmingham, 3, not later than 14th September, 1953.

DUBLIN. LOCAL APPOINTMENTS COMMISSION. Position vacant. ASSISTANT MEDICAL OFFICER in the Tuberculosis Service of the Dublin Corporation. Salary £1000–£30–£1210, plus temporary bonus of £75.

Application forms and particulars from the Secretary, 45, Upper O'Connell-street, Dublin. Latest time for receiving completed application forms: 5 P.M. on 15th September, 1953.

DUBLIN. CORPORATION OF DUBLIN. Vacancy for Temporary Whole-time ANÆSTHETIC REGISTRAR. Salary £650 p.a., plus temporary bonus at present £54 3s. 4d. p.a.

Application forms and full particulars from the Establishment Department, City Hall, Dublin. Latest date for receipt of applications 14th September, 1953.

P. J. HERNON, City Manager and Town Clerk.

City Hall, Dublin, 26th August, 1953.

DURHAM. ADMINISTRATIVE COUNTY OF DURHAM; URBAN DISTRICTS OF BLAYDON, RYTON, AND WHICKHAM. Appointment of Medical Officer of Health and Assistant County Medical Officer. Applications are invited from duly qualified medical practitioners holding a Degree or Diploma in Sanitary Science, Public Health, or State Medicine for the separate appointments of ASSISTANT COUNTY MEDICAL OFFICER for the No. 1 (Blaydon) Area and MEDICAL OFFICER OF HEALTH for the Urban Districts of Blaydon, Ryton, and Whickham. The total salary payable will be £1406 rising by increments of £56 (4) and £22 (3) to £1696 p.a., and the apportionment of services will be Assistant County Medical Officer 6/11ths (2/11ths administration and 4/11ths clinical) and 5/11ths Medical Officer of Health. The Officer appointed will be required to devote the whole of his time to the duties of the appointments and will be restricted from engaging in private practice. As Assistant County Medical Officer in connection with the services of the Local Health Authority he will act under the direction of the County Medical Officer of Health. As District Medical Officer of Health he will be responsible to the County District Councils. The appointments will be superannuable and so far as they are made by the County District Councils will be subject to the Sanitary Officers (Outside London) Regulations, 1935 and 1951, and Section 110 of the Local Government Act, 1933. The appointment of Assistant County Medical Officer will be subject to the regulations for the time being in force of the County Council relative to the payment of salary in the case of sickness. Subject so far as they are applicable to the provisions of the said Section 110 the 4 appointments will be terminable by 3 calendar months notice on either side and the successful applicant will be required to pass a medical examination. A car allowance will be payable. Canvassing directly or indirectly will disqualify and applicants must disclose in writing whether they are related to any member or senior officer of the employing authorities.

Applications, stating age, qualifications, and experience, and giving the names of 3 persons to whom reference may be made should be sent to the undersigned not later than 22nd September, 1953. J. K. HOPE, Clerk of the County Council.

Shire Hall, Durham, 24th August, 1953.

LONDON COUNTY COUNCIL. Applications invited from registered medical practitioners for appointment as Whole-time ASSISTANT MEDICAL OFFICER in the Public Health Department. £850 a year, rising by annual increments of £50 to £1150 a year, subject to review. Commencing salary dependent on local government service. No emoluments. Duties primarily connected with child health. It will be an advantage if the candidate is experienced in (1) maternity and child welfare work and (2) the School Health Service and has the Diploma in Public Health.

Application forms from the Medical Officer of Health (PH/D.1), County Hall, S.E.1, for return by 19th September. (877.)

NORFOLK. COUNTY OF NORFOLK. Assistant County Medical Officer and Medical Officer of Health. The Norfolk County Council and the County District Councils concerned invite applications from registered medical practitioners holding the Diploma in Public Health for the whole-time appointment of ASSISTANT COUNTY MEDICAL OFFICER AND DISTRICT MEDICAL OFFICER OF HEALTH for the undermentioned area:—

Area No. 8.
Docking Rural District.
Walsingham Rural District.
Wells Urban District.
*Hunstanton Urban District.
Total population approximately 48,000.
*As Assistant County Medical Officer only.

The person appointed will be employed for seven elevenths of his time as Assistant County Medical Officer and four elevenths as District Medical Officer of Health. He will act as an Assistant County Medical Officer under the direction of the County Medical Officer and as District Medical Officer of Health he will be subject to the instructions of the District Councils concerned. The combined salary scale will be £1364, rising to a maximum of £1618 p.a. Travelling and subsistence expenses will be paid in accordance with the County Council's scales.

Application forms, together with further particulars of the appointment, can be obtained from the County Medical Officer, 29, Thorpe-road, Norwich, to whom completed application forms should be returned not later than 12th September, 1953.

NEW ZEALAND DEPARTMENT OF HEALTH. Applications are invited from registered medical practitioners for appointment as MEDICAL OFFICERS in the Division of Child Hygiene, Department of Health, New Zealand. Applicants should preferably be between the ages of 28 and 40 and should have had child health work or postgraduate qualifications in this respect would be an advantage. Salary £(NZ)860–£(NZ)1180 according to qualifications and experience.

Application forms may be obtained on request from the High Commissioner for New Zealand, 415, Strand, W.C.2, mentioning this paper and quoting reference No. 16/195/5. Completed applications to be lodged not later than Friday, 2nd October.

HER MAJESTY'S COLONIAL SERVICE. Nigeria. Applications are invited from Doctors with medical qualifications registrable in the United Kingdom and with at least 1 years experience after qualification for the following posts in the Medical Department of the Government of Nigeria :—

(*a*) MEDICAL OFFICERS, for general duties in preventive and curative medicine which may include purely rural health work, involving much travelling.

(*b*) MEDICAL OFFICERS OF HEALTH. Duties as under (*a*). In addition the selected Officers would undertake the control of sanitary matters, and may be required to perform the duties of Port Health Officer at a sea or air port. Candidates should possess a Diploma in Public Health. A Diploma in Tropical Hygiene, though not essential, is desirable.

Appointments may be made as follows :—

(*a*) on 3 years probation for permanent and pensionable employment in the Colonial Medical Service, with retiring age of between 45 and 55. Pensions are at the rate of 1/600th of final pensionable emoluments for each completed month of reckonable service ;

(*b*) from the National Health Service. Candidates may resign from the National Health Service but retain their superannuation rights during their time in Nigeria (up to 6 years) and receive a resettlement grant of 20% of the aggregate of their Colonial salary on leaving Nigeria at the end of their engagement ; or

(*c*) on short-term contract (2–4 tours of 18 months duration) with inclusive salary of from £1087 p.a. rising to £2000 p.a. ; on completion of contract a gratuity is paid at the rate of £37 10s. for each completed period of 3 months service (including leave).

Officers appointed under (*a*) or (*c*) are required to contribute to a Widows' and Orphans' Pension Scheme. Salaries, including pensionable expatriation pay for Officers appointed under (*a*) or (*b*) range from £950 to £1850 p.a. Starting salary in all cases depends on experience and war service. Quarters are provided at low rents. Free passages in both directions are provided for Officer and his wife. Payment of the cost actually incurred on 1 outward and 1 homeward passage for each of 2 children under age of 18, subject to maximum of £75 in respect of the return journey for each child, is also granted. Income-tax at local rates. Local leave is permissible and generous home leave is granted after each tour of 18 months duration.

Application forms can be obtained from the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith-street, London, S.W.1 (quoting reference No. CDE. 117/14.01).

HER MAJESTY'S COLONIAL SERVICE, Barbados. An ASSISTANT MEDICAL SUPERINTENDENT is required for the Mental Hospital for general clinical duties and to undertake general superintendence and control in the absence of the Medical Superintendent. Appointment will be on a permanent basis with pension (non-contributory) at the age of 55, or on agreement for 3 years (in which event regulations governing passages and quarters are slightly different). Salary scale ranges from $4128 to $5280 (£860–£1100) p.a. (1 Barbados dollar equals 4s. 2d.). A temporary cost-of-living allowance of £32 10s. p.a. is also payable. Unfurnished quarters are available at rental of 5% of salary. Free passages on appointment are provided for Officer and family up to a maximum cost of £300. Free passages on leave are provided for Officer and wife only at end of tour of service of 3½ years (pro rata payment on completion of not less than 2 years of tour). Home leave may be granted on full pay after each tour. Income-tax at local rates. Social and recreational amenities are good. Climate is healthy for Europeans. Educational facilities are available. Candidates must possess qualifications registrable in the United Kingdom, and have had experience in mental diseases. Possession of a Diploma in Psychological Medicine is desirable but not essential.

Application forms can be obtained from the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith-street, London, S.W.1 (quoting reference No. CDE. 117/28/03).

HER MAJESTY'S COLONIAL SERVICE. Bahamas. Applications are invited for the post of PATHOLOGIST AND VENEREAL DISEASE OFFICER at the Bahamas General Hospital. Appointment will be on agreement for 3 years. Salary is in scale £1150–£50–£1300 a year, starting salary depending upon qualifications and experience. Fees for pathological work undertaken on behalf of private practitioners may be retained. Quarters are not provided, but assistance towards rent of a furnished house will be given. Cabin-class passages will be provided for Officer, wife, and up to 2 children on appointment and on completion of agreement. Assistance up to £40 is given towards cost of transporting heavy baggage. No income-tax. Generous leave on completion of agreement. Climate is excellent and healthy for Europeans. Social and recreational amenities are good. Candidates should hold qualifications registrable in the United Kingdom and should have had experience in pathology and venereal disease work.

Application forms can be obtained from the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith-street, London, S.W.1 (quoting reference No. CDE117/27/04).

HER MAJESTY'S COLONIAL SERVICE. Tristan da CUNHA. DOCTOR required for general medical duties on South Atlantic Island of Tristan da Cunha. Appointment would be on agreement for 2 years. Salary £1200 a year. No income-tax. Free quarters provided equipped with heavy furniture, for which a small rental may be charged. Free passages provided for Officer, wife, and up to 3 children to and from the Island. Generous home leave granted after tour. Private practice is not permitted. Special importance will be attached to suitability of personal qualities for service in this small, remote but distinctive community. Candidates must possess medical qualifications registrable in the United Kingdom.

Application forms can be obtained from the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith-street, London, S.W.1 (quoting reference No. CDE.117/170/02).

MANCHESTER. CITY OF MANCHESTER TRANSPORT DEPARTMENT. MEDICAL OFFICER. Applications are invited for this whole-time superannuable appointment, the salary scale for which is J.N.C. F (£1350–£50–£1600 p.a.). Commencing salary will be fixed according to experience and qualifications.

Further particulars, together with forms of application, may be obtained from the Town Clerk, Town Hall, Manchester, 2, to whom the completed form should be returned (endorsed "Medical Officer, Transport Department") not later than 19th September, 1953. Canvassing will disqualify.

SALOP. COUNTY OF SALOP. The County District Councils concerned jointly with the Salop County Council invite applications from registered medical practitioners holding the Diploma in Public Health for the whole-time superannuable position of ASSISTANT COUNTY MEDICAL OFFICER AND DISTRICT MEDICAL OFFICER OF HEALTH for the following Councils :—

Ellesmere Urban and Rural Districts,
Wem Urban and Rural Districts,
Whitchurch Urban District,
(total population about 32,000).

Combined salary (in accordance with relevant National awards) £1300–£1618. Commencing salary in accordance with experience. The successful candidate will be required to provide a car. Travelling and subsistence expenses will be paid in accordance with the County Council scales. The person appointed will act as Assistant County Medical Officer under the direction of the County Medical Officer of Health, but as District Medical Officer of Health he will be directly responsible to the District Councils concerned. A house can be made available at Whitchurch. Subject to the agreement of the respective Councils concerned, another similar appointment will shortly become available in the adjoining Oswestry area comprising the Borough and Rural District of Oswestry ; and applicants should state whether they also wish to be considered for this alternative appointment.

Forms of application and copies of further particulars and conditions of service may be obtained from the undersigned, to whom applications should be submitted not later than 10th October, 1953.

G. C. GODBER, Clerk of the County Council.
Shirehall, Shrewsbury.

SWANSEA. COUNTY BOROUGH OF SWANSEA. SWANSEA PORT HEALTH AUTHORITY. Applications are invited from qualified registered medical practitioners, with local government experience and holding a registered diploma in Public Health, Sanitary Science or State Medicine, for the post of DEPUTY MEDICAL OFFICER OF HEALTH of the County Borough of Swansea and the Swansea Port Health Authority, at a salary of £1300 p.a. rising by 2 annual increments of £100 and an annual increment of £50 to £1550 p.a. A car allowance of £115 p.a. will also be paid. The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, to the passing of a medical examination, and to determination by 3 months notice in writing on either side. Applicants must not be more than 45 years of age unless already in the employ of a local authority.

Applications, stating age, experience and qualifications, together with copies of 3 recent testimonials, must be delivered to the undersigned not later than 25th September, 1953. Canvassing, either directly or indirectly, will disqualify.

T. B. BOWEN, Town Clerk.

The Guildhall, Swansea, 20th August, 1953.

TREASURY MEDICAL SERVICE. Applications are invited from medical practitioners, practising in the districts detailed below, for appointment in a part-time and mainly advisory capacity as LOCAL TREASURY MEDICAL OFFICER for each of the places or groups of places shown. The town shown in parentheses after the place-name indicates the Head Post Office Area in which the place, or group of places, is situated. Successful applicants will be required to examine and report on the condition of certain Government Officers, teachers, candidates for appointment, &c., who may be referred to them from time to time ; and to attend when summoned to an emergency case of accident or sudden illness occurring in a Government office in the neighbourhood. Fees for this work, and mileage allowance where necessary, will be paid on a scale agreed with the British Medical Association.

Intending applicants should write, within 14 days, to Treasury Medical Adviser, Treasury Chambers, Whitehall, S.W.1, for a form on which application may be made. Applicants should be not more than 60 years of age.

The places for which applications are invited are as follows :—

ENGLAND AND WALES

Catworth, Kimbolton and Spaldwick (Huntingdon).
Flixton and Urmston (Manchester).
Thame and Brill (Oxford and Aylesbury).
Westbury, Yockleton and Halfway House (Shrewsbury).

SCOTLAND

Penicuik (Edinburgh).

SHEFFIELD EDUCATION COMMITTEE. Applications are invited from duly qualified medical practitioners (Men and Women) for appointment as ASSISTANT SCHOOL MEDICAL OFFICER. Special consideration will be given to the applications of candidates who have had experience in the treatment of children. Possession of the D.P.H. or D.C.H. qualification will be an advantage. Salary scale to be in accordance with the Whitley Councils for the Health Services (Great Britain) Medical Council, Committee "C." Superannuable post. Subject to satisfactory medical examination.

Application forms and particulars of the appointment to be obtained from the undersigned and returned not later than 19th September, 1953.

STANLEY MOFFETT, Director of Education.

SHEFFIELD. CITY OF SHEFFIELD. Assistant Medical OFFICER for Maternity and Child Welfare required in Public Health Department. Candidates should have experience or special qualifications in either child welfare or obstetrics. Post superannuable; medical examination. Salary scale £950–£50–£1300 p.a.

Applications, giving age, qualifications, experience, present and previous appointments with dates, copies of 2 testimonials, names of 2 referees, and endorsed "Assistant Medical Officer (M.C.W.)," to be forwarded by 23rd September, 1953, to JOHN HEYS, Town Clerk, Town Hall, Sheffield, 1.

General Practice

For an Executive Council post (England and Wales) apply on form E.C.16A obtainable from the council. Mark envelope "Vacancy."

COUNTY OF CAITHNESS EXECUTIVE COUNCIL, BURGH OF WICK, CAITHNESS. Applications are invited from registered medical practitioners willing to provide general medical services under the National Health Service (Scotland) Acts in the Burgh of Wick, the Scottish Medical Practices Committee having included the said Burgh in the list of areas where it appears necessary or desirable that there should be an increase in the number of principals. The District requiring to be served is partly urban and partly rural. Accommodation in the Burgh to the satisfaction of the Council must be provided by the practitioner. Initial practice allowance available.

Applications in writing on form E.C.16 (obtainable from the address given below) should be sent to the undersigned, together with details of professional experience, age and other relevant supporting particulars, within 14 days of the appearance of the announcement in this Journal.

JAMES CAMPBELL, Clerk to Caithness Executive Council.
6, Back Bridge-street, Wick.

Hospital Services : Non-Medical Appointments

LIVERPOOL. THE UNITED LIVERPOOL HOSPITALS. Applications are invited for a full-time appointment of a NON-MEDICAL BIOCHEMIST at the Liverpool Royal Infirmary. The successful applicant will be required to work under the Consultant Pathologist and to perform biochemical estimations and examinations in the clinical pathology laboratory of the Royal Infirmary and of other hospitals in the Group. Conditions of service are as laid down by the Professional and Technical Council A of the Whitley Council for the Health Service. The successful applicant will be included in the Basic or Senior grade according to experience and qualifications.

Apply by 26th September, 1953, with details of age, qualifications and experience, and the names of 3 referees, to the Secretary, The United Liverpool Hospitals, 80, Rodney-street, Liverpool, 1.

Appointment : Too Late for Classification

GRIMSBY HOSPITALS MANAGEMENT COMMITTEE. SPRINGFIELD HOSPITAL (Chest and Infectious Diseases). (210 Beds.) Applications are invited for the post of SENIOR HOUSE OFFICER (medical). Salary in accordance with terms and conditions of service of hospital medical and dental staffs, £670 p.a. House available at small rental. All forms of tuberculosis are treated in this Hospital and modern methods of therapy are available, including major thoracic surgery.

Applications, with names of 3 referees, should be submitted to the Hospital Secretary, Springfield Hospital, Scartho, Grimsby.

Miscellaneous

To non-professional posts the Notification of Vacancies Order 1952 applies

Oil Company operating in Trinidad, B.W.I., has a vacancy for Medical Officer. Candidates should be between 30 and 35, with good general experience. Preference will be given to those who have done postgraduate work in skin diseases. Minimum salary £1500 p.a., plus allowances and pension scheme.—Applications to Address, No. 852, THE LANCET Office, 7, Adam-street, Adelphi, London, W.C.2.

Laboratory Technician (unmarried) required before Christmas for private laboratory in Bulawayo, Southern Rhodesia. Should be Associate or Fellow of I.M.L.T. and have sound knowledge of laboratory work required in clinical medicine, with special experience in histology and chemical pathology. Salary £840 a year, rising by £50 yearly for 4 years. 3 weeks holiday after each year; passage out paid.—Applications in first place to, and further details from, Dr. C. J. HARWOOD-LITTLE, Royal West Sussex Hospital, Chichester.

Consulting-rooms, full and part time, and Houses in the medical area.—ELGOOD & Co., 1, Bentinck-street, W.1 (WELbeck 8974).

Whole-time Doctor, Male, to take medical charge of Pinewood Studios, Denham Laboratories, and a Precision Engineering Factory at Shepherd's Bush. The candidate, who should hold the M.D. and/or the M.R.C.P., age middle thirties, and preferably with G.P. experience, would be required to live in the Uxbridge-Northolt-Gerrards Cross area and to run own car. Salary commencing at not less than £1500 p.a., depending on experience.—Further particulars from the Consulting Physician, J. ARTHUR RANK ORGANISATION LTD., Film House, 142, Wardour-street, London, W.1.

Frinton-on-Sea, Essex. Private nursing and convalescent home. Corner three-storey property. 7 bedrooms, 2 bathrooms, 3 reception rooms, &c., large garden, garage. Central heating, main services. Fully registered for 6 patients. For sale freehold as a going concern including equipment and mainly furnished, £8500.—Apply, H. S. HEALY, F.A.I., 8, Russell Chambers, Bury-place, London, W.C.1 (HOLborn 4251/5259).

Vacant in De Vere-gardens, W.8 self-contained ground-floor flat, suitable Doctor. 2 large rooms, reception hall, kitchen, bathroom, living accommodation. Well furnished. Lease. Door-plate permitted.—Address, No. 849, THE LANCET Office, 7, Adam-street, Adelphi, London, W.C.2.

Doctor's House, detached, private practice for last 20 years, same hands, now retiring. 6 rooms, including waiting and consulting, all wired for power. Garage. Main road in growing district 3½ miles from favourite S.W. seaside resort. Price £5000. Furniture and fittings if required at valuation.—Address, No. 851, THE LANCET Office, 7, Adam-street, Adelphi, London, W.C.2.

Well-furnished rooms in woman doctor's house (2 flats). Surrey town, 14 miles from Victoria. Large front sitting-room, free use kitchen adjoining, large bedroom, all newly decorated. Own bathroom (c.h.w.), own telephone, garage, and entrance.—Address, No. 853, THE LANCET Office, 7, Adam-street, Adelphi, London, W.C.2.

Private nursing home, approved and licensed by Hos-pitals Board (Owner-Matron retiring), containing ground and first floor wards for 30 patients, with kitchens, nurses and staff bedrooms and sitting rooms, private flat, office, &c.

First-class order and conforming to County Council requirements. Main water and electric light. Part central heating. New drainage system. Spacious range of buildings comprising garages, stabling, and flat. Finely timbered grounds with large lawns, kitchen garden, and paddock. 8 acres.

Very moderate price or might be let. All contents available. Average yearly profit around £2000. Accountants figures supplied. Quiet position in lovely country, 10 minutes walk half-hourly bus service to Chelmsford. Ideal also for school, &c.

Recommended by GEORGE TROLLOPE & SONS, 25, Mount-street, London, W.1. (Telephone: GROsvenor 1553). (5635.)

Applicants for posts requiring testimonials copied or duplicated should communicate with MANTON SECRETARIAL SERVICE, LTD., 98, Victoria-street, S.W.1 (Phone: VICtoria 0141), who are specialists in this kind of work.

"Pregnancy Diagnosis by the Xenopus Method." 24-hour service.—Send specimen of urine and £1 1s. fee to: WELBECK BIOLOGICAL LABORATORIES, 26, Park-crescent, Portland-place, W.1 (Telephone: MUSeum 5386–7).

The absolute accuracy essential in typing medical work is guaranteed by the JOAN TREE AGENCY, 58, Maddox-street, W.1. MAYfair 6778. Collection and delivery.

Lancet: Copies required, Nos. 6699, 6710, 6718, 6728, 6732 and 6737. Also Index to Vol. 261.—Offers to Box E/5, Strand House, London, W.C.2.

Microscopes. Secondhand bargains, guaranteed sound order. Deferred terms if desired. Write for lists.—WALLACE HEATON LTD., 127, New Bond-street, W.1.

Patent No. 603113 for "Apparatus for Determining If and to What Extent Air Contains Carbon Monoxide." Owners desire to meet all demands for the utilisation of this Patent and invite inquiries from manufacturers and others in Great Britain prepared to assist in its commercial exploitation.—Address in first instance, Messrs. POLLAK, MERCER & TENCH, Chartered Patent Agents, 134, Cheapside, London, E.C.2.

For Sale. Modern Laboratory Microscope; all accessories. —Particulars from Pathologist, Tooting Bec Hospital, S.W.17.

Austin A30 Seven, and A40 range. A limited number of orders now acceptable from proven essential users for delivery ahead.—Brochures from Austin House, 140/144, Golders Green-road, London, N.W.11.

Cambridge Portable Electrocardiograph for Sale. Pur-chased in 1948. Little used. Being completely overhauled by makers now, including new hide case. Delivery direct from the makers with guarantee. Cost £200 with unipolar leads.—Offers to GHOSH, Burton-on-Trent.

Name Plates in oxydised bronze with ceramic enamel letters. Leaflet and sketch post free.—MAILE & SON, 367, Euston-road, N.W.1 (phone EUSton 2938).

G. M. BROADBURN

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In Winter . . .

The doctor who prescribes 'Sulfex' does much towards reducing absenteeism caused by the common cold. He provides not only relief from nasal congestion, but also prophylaxis against secondary invading organisms believed to be responsible for the severe late manifestations of the common cold. 'Sulfex', administered intranasally at the first sign of a cold, is a valuable ally for promoting recovery.

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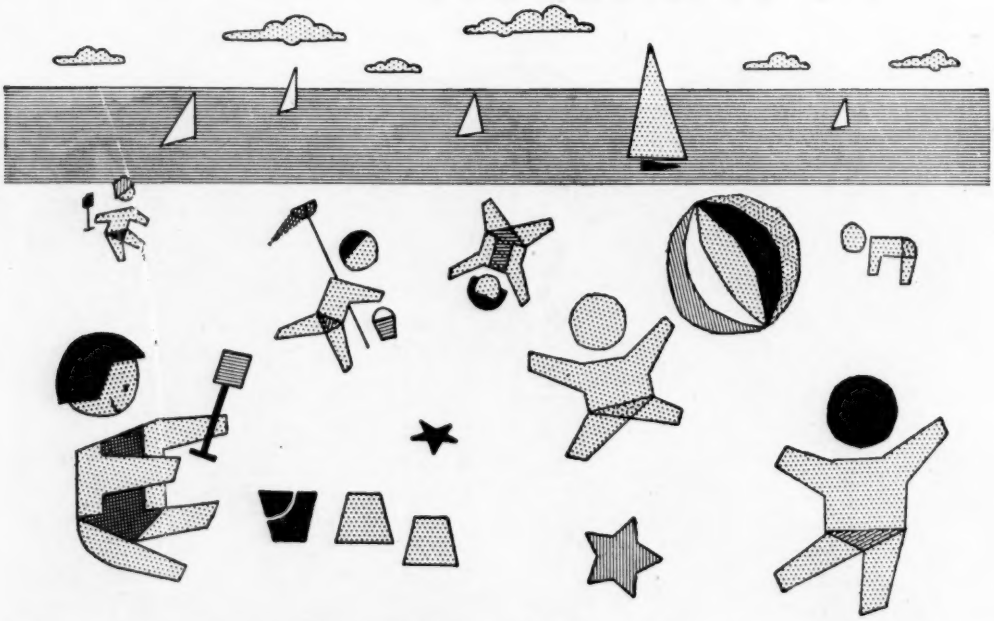
IN "SUMMER DIARRHOEA"



Precisely how warm weather influences the incidence of infective diarrhoea in children is uncertain, but the increased number of flies and amount of dust makes it more likely that milk and food will become contaminated, while the rapid multiplication in warm weather of the various organisms known to be associated with the disease may lead to increased virulence.

'Thalazole' is indicated when dysentery bacilli are responsible for sporadic or epidemic cases. But it is often not possible to isolate the causal organism in outbreaks, and since even the mildest cases may suddenly assume a grave character, it is suggested that treatment with 'Thalazole' should be considered as an immediate routine measure.

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